CRASH BANDICOOT **CRASH BANDICOOT 2**

Rising to Greatness: The History of Naughty Dog

The stories behind one of gaming's most renowned studios.

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By Colin Moriarty

Gamers today know Naughty Dog like movie-goers know Spielberg and Scorsese, and there's a reason for that. The minds there continuously make some of the industry's best games, ones that push the boundaries of graphical fidelity and storytelling in particular.

In the mid-to-late '90s, the studio was best-known for Crash Bandicoot, but as time has gone on -- and since it joined Sony's first party stable -- Naughty Dog's drive to create the best mascot platformers, like Jak & Daxter, has evolved into some of the most stunningly realistic and engaging story-driven action titles of the current generation in the form of the Uncharted trilogy and The Last of Us.

I've already written [The History of Sony Bend](#), [The History of Sony San Diego](#), [The History of Santa Monica](#), and [The History of Insomniac](#). But one piece I've wanted to write more than any other is The History of Naughty Dog. After (literally) years of trying to tell this story, I was finally given the access necessary for such an endeavor, one that covers three decades of riveting history from Sony's crown jewel developer.

Have you played Crash Bandicoot?

<div align="center">

YES	NO

</div>

This past summer, Naughty Dog invited me to its gorgeous office space at Water Garden in Santa Monica, California, where I spent three full days picking the brains of some of the company's most senior, most tenured employees. From Evan Wells and Christophe Balestra to Amy Hennig and Neil Druckmann – and even the company's co-founders, Andy Gavin and Jason Rubin – Naughty Dog gave me unprecedented access to nearly 20 people, where I could ask whatever I wanted. And I did.

These three days resulted in such an enormous wealth of information that the idea of one long-form piece has turned into five. Indeed, the final product will be bigger than every other history-of I've written combined. This is merely part one.

Welcome to the most complete history of Naughty Dog ever written. I hope you enjoy

it.

Colin Moriarty (September 27, 2013)

I. Jason and Andy's Hebrew School Magic

In Judaism, you become a man at age 13 in a ceremony known as a Bar Mitzvah, and such a step requires studious preparation at something aptly-named pre-Bar Mitzvah class. It was in one such class that two 12-year-olds – Jason Rubin and Andy Gavin – met. Rubin and Gavin would go on to found one of the most prolific studios in the history of the gaming industry, but their origins are far more unassuming.

In Mr. Simon's class in northern Virginia, a group of like-minded kids sat together, not paying too much attention to the rigors of pre-Bar Mitzvah. "There was this little club," Gavin explained. "Jason and I and two other guys, we found we liked video games and we had Apple IIs," the cream-of-the-crop personal computer of the early-'80s and the very first mass-market computer ever created.

The Apple II. (Courtesy: John Randolph Burrow)

"I'd been programming for two years," Gavin continued, "and Jason had been making little games of his own, too." Upon examining each other's crude projects, the two boys almost immediately learned that their individual skillset could fill in the other's weakness. Their friendship – and subsequent partnership – began in earnest.

"For being 12, [my games] were very advanced code-wise, and Jason's looked great.

because he had this artistic inclination. He could draw really well. But his didn't run very well and mine didn't look very good. So really quickly, we were like, 'Hey, we should get together.'" They began working with each other to create projects that were more complete using both of their specialties.

For being 12, [my games] were very advanced code-wise, and Jason's looked great, because he had this artistic inclination.

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Gavin, Rubin, and their computer-using contemporaries grew up in a time when understanding computers was a rarity, especially when it came to people their age. Overcoming hard-to-conquer issues became their specialty out of sheer necessity, a skill all the more useful when you consider they did it without the Internet.

"One of the great things about the business, both video games and computers in general at that time, everything was new," Gavin said. "Few people had them. People didn't really know anything about them. These days, lots of kids use computers. Knowing how to program or use computers then, there were very few of us."

"You couldn't get information," Rubin noted. "If you had a problem, there were no answers." To find any sort of clarity early in their partnership, the boys often had to go to super-specialized Apple user groups or call accessible industry intelligentsia and hope they could help.

PUNCH-OUT!!

AS CLOSE TO THE RING AS YOU CAN GET WITHOUT GOING THROUGH THE ROPES.
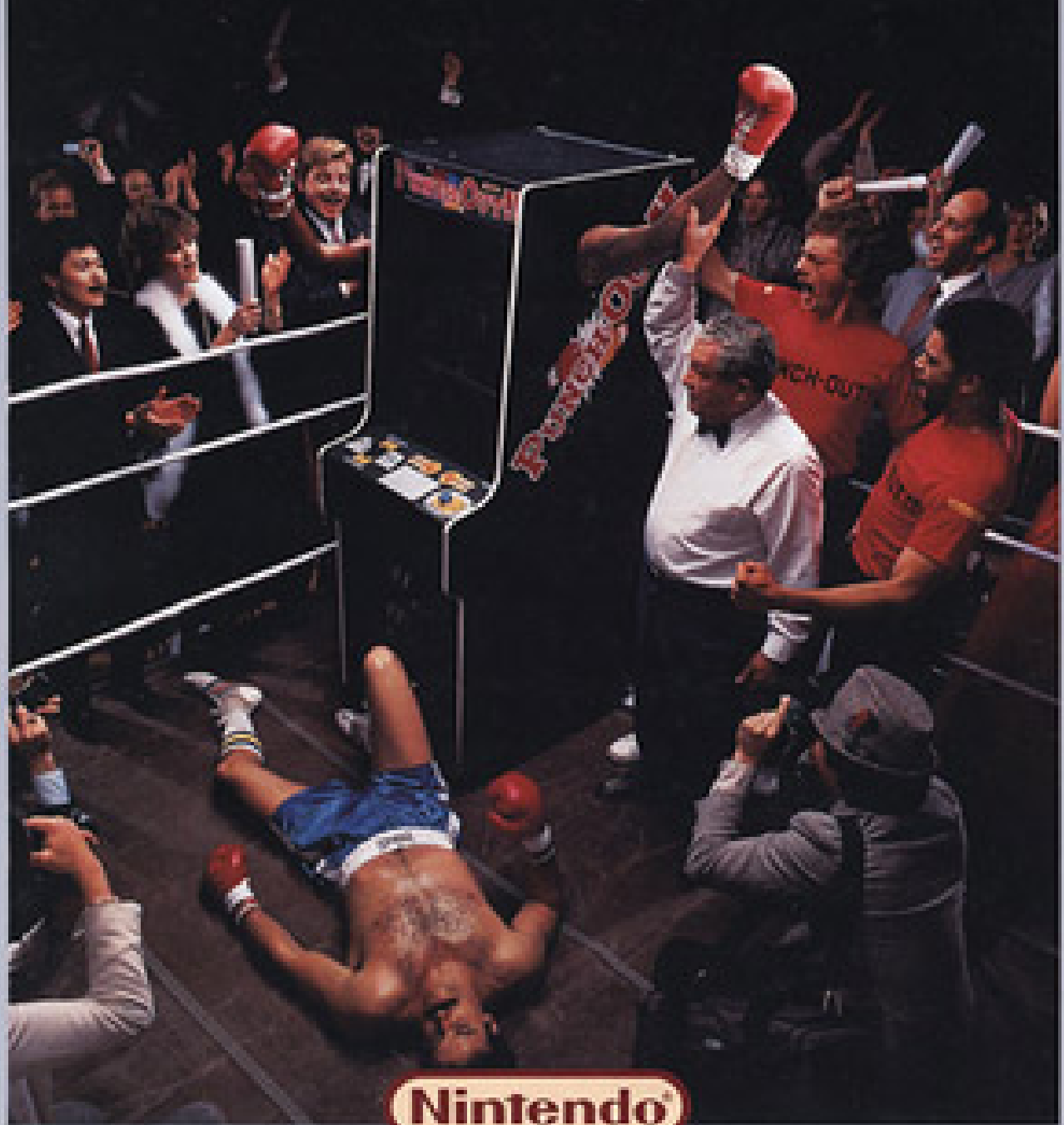
Nintendo

"There would be some guy I always called 'The Gandalf,'" Rubin recounted, talking about the kind of person he'd often encounter at user groups or on the phone, "some guy with a long white beard that was the senior guy. He probably didn't know that much, but he answered the questions, because there were no online forums. There were books, but there were very few books... Books don't answer questions like Google does, clearly. How many books could you buy? You couldn't search for them online."

One major source of information for them was Byte Magazine, but even that was super-niche. Then again, they wouldn't have it any other way. "It was nice that everybody didn't know how to program," Rubin admitted, "because if you knew how to do it, you had a leg up on the rest of the world."

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With their partnership forged and their ability to solve a litany of problems solidified, Rubin and Gavin had their own ideas that they wanted to get off the ground, but it was an advanced arcade game that they truly coveted: the original arcade iteration of Punch-Out!!. Instead of making their own game, they decided to copy Nintendo's. And like bold kids that didn't know any better, they began making a facsimile of the game in 1983.

"We could have made another fighting game like that, but no, we actually copied all the characters exactly," Gavin admitted. "It never occurred to us that you can't just put out a game that copies characters exactly." But that didn't stop them. The boys used 1000 ISO film to record all of the game's moves, and then began to copy it verbatim using their chops for programming and art. They worked on their unofficial

Verbatim using their chops for programming and art. They worked on their unofficial PC port of Punch-Out!! for a year. "It was actually pretty good," Gavin noted proudly.

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But then, in 1984, disaster struck. No, Nintendo didn't send its army of lawyers after Rubin and Gavin (Rubin's father, ironically, was an IP lawyer and told the boys what they were doing was illegal, though that didn't put a freeze on their activities). They instead undid themselves with a common error in early personal computing: they accidentally overrode their work. "While trying to make a backup of it, I think I accidentally copied a blank floppy onto the only copy. I can't remember exactly, but basically, we lost it due to 12-year-old backup habits." Their hack of Punch-Out!! was gone forever.

(Insanely, this wasn't the only time they lost one of their games well into development. An original golf game they toiled on several years later was also lost when Gavin accidentally overrode the only copy they had.)

Out of the ashes of self-defeat came something better, though: their first original game. It was called Math Jam, and it, like so many other Apple II games of the time, was educational. Gavin and Rubin weren't yet known as Naughty Dog; they instead branded their game as coming from JAM: Jason and Andy's Magic. Their new company incorporated in 1984. They were 14-years-old.

To hell with that. There are no rules with games. You can just put them out.

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"We got the idea, I don't remember how, to do this math game," Gavin said. "I think someone's friend or parent or something was a teacher for disadvantaged children." It had a "fun character" in it "that taught basic arithmetic."

JAM self-published the game, as many early indie Apple devs did, by copying the game onto five-and-a-quarter-inch discs, photocopying basic instructions, and throwing it all in a Ziploc bag. They started selling Math Jam to schools in 1985, until they ran into a pretty major problem for 15-year-olds to overcome.

To get Math Jam into more schools, they had to somehow navigate the educational bureaucracy. They were "told to get three or four psychiatrists and 16 teachers to sign off on" Math Jam before they could start selling more copies, Rubin explained.

"To hell with that," he continued. "There are no rules with games. You can just put them out."

II. Going Bigger

The unexpected challenges Rubin and Gavin encountered while making Math Jam pushed them to create projects that were more in-line with their love of games. "[Math Jam] was a game, but we thought educational was a higher calling, right?" Rubin asked rhetorically. But the business realities of making an educational product didn't make things easy for them. "So we started making games. That was our passion," he later said.

Their first game was called Ski Crazed, and it released in 1986, when the boys were 16. It was a title that they iterated on for some time. "Jason was hacking this ski game," Gavin recounted, noting that it was originally called Ski Stud. "It had that 1984, Hot Dog... The Movie ethos, where you were going to ski down the slope and then pick up chicks and go in the hot tub, that kind of thing."

One of their greatest out-of-left-field solutions was manipulating an Apple II program called Pinball Construction Set to create art for their games...

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Unfortunately, Ski Stud, as it was still known, wasn't running all that well. Rubin wrote it in BASIC, "and it was really, really slow," Gavin said. "As you went down the hill, it got slower and slower. So I rewrote it in Assembly and it got fast."

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The lead-up to the release of Ski Crazed forced Gavin and Rubin to tackle issues in unique ways, something they did time and time again. One of their greatest out-of-left-field solutions was manipulating an Apple II program called Pinball Construction Set to create art for their games, going pixel-by-pixel with the crude tools of the time: a terrible touchpad and a tiny portion of a CRT monitor.

Have you played Crash Bandicoot?

YES   NO

"Paint programs weren't very good, and almost none of them included pixel editing," Gavin said. "They would use the joystick. There were no mice, just these really lousy touchpads that were really spastic. The Pinball Construction Set bumper editor," thankfully, "actually had zoom mode, although it was also kind of spastic."

Rubin manipulated this program to make art for his early games. (Courtesy: Wikipedia)

Rubin's art in their early projects required an incredible amount of patience to create. Using barely-functioning tablet technology, he had to try to steady the "three pixel jitter" of Pinball Construction Set's pixel editor. "You'd hit it, miss, undo. Hit it, miss, undo. Each pixel, to get the line. It was an absolute nightmare," Rubin admitted.

But there was more. To get the art from Pinball Construction Set to their games, they had to trick their Apple IIs to give them the created images. "You couldn't save, so the only way to get the image out was to do a reset on the hardware, on the Apple hardware, and then you could catch the cache of the graphics when it was in the frame buffer," Rubin said. In other words, they had to constantly hard-reset their machines, over and over again, split what they needed from all the data being dumped, and repeat the process.

You couldn't save, so the only way to get the image out was to do a reset... on the Apple hardware...

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Gavin and Rubin conquered problems like this regularly, and both men feel that it was these trials and tribulations that not only made them into the successful game creators they would later become, but that their experience is a common theme among the first generation of game programmers, designers, and artists.

Rubin recounted an experience two decades later, after he and Gavin sold Naughty Dog to Sony and left the company. They founded a separate company, called Flektor, and Rubin had to get into the weeds to show his young artists that difficult tasks aren't necessarily insurmountable.

"We had five artists [at Flektor]. I said to the artists, 'I need a three-by-three font for the copyright notice we have to put on [our video editing tool], because there's no way we're going to spend 10 pixels of screen real estate doing some sort of font. Gimme a three-by-three font.'"

"A couple hours later, they came back and said, 'A three-by-three font is impossible. How do you do an S?' I said, 'You do it.' 'When we type it in, Photoshop won't give us a font that's less than six. Six is the minimum.' 'Draw it by hand!' 'We can't. The tablet, the brush...' 'Just do it pixel-by-pixel with the mouse!' 'We can't do it.' 'I can do it.' 'Yeah, right!'"

"15 minutes later, I had written out the copyright notice in three by three font and it was legible. They had no idea it could be done."

I think that's lost on a lot of the newer generation, who simply expect to be given tools and to work with those tools.

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"I think there's a reason why a lot of the cutting-edge stuff is still being done by people that started 20 or 30 years ago," he continued. "That is, you don't expect it to be handed to you. You have to go figure it out. You're given a piece of hardware or a piece of code or a tool set. Then you push the limits of it and figure out what it can do by experimentation, rather than manuals or something else. I think that's lost on a lot of the newer generation, who simply expect to be given tools and to work with those tools. A perfect example of that is Photoshop, which is so easy to use now with brushes and tablets that nobody thinks about pixel editing with a mouse and drawing a font. There are so many font tools. Who would ever draw one by hand?"

This mentality allowed them to persevere in a market that was finally starting to recover from the infamous Video Game Crash. They pitched Ski Stud to a small, Michigan-based publisher called Baudville, and Baudville bit. It was at that time that the name changed to Ski Crazed at the publisher's request. "They were fairly small time. They might have had 30 or 40 employees," Gavin recounted.
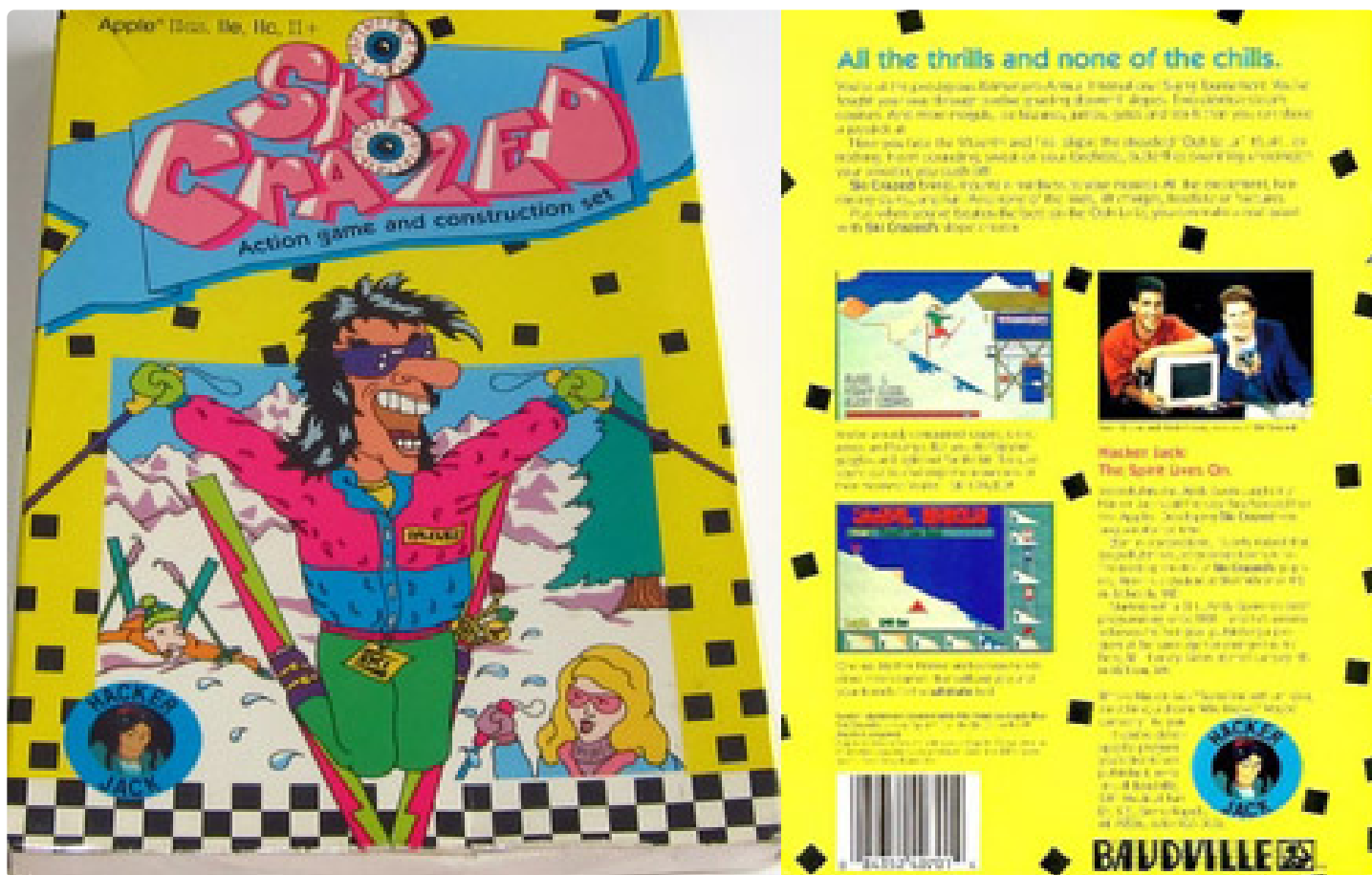
Ski Crazed was JAM's first proper game. The boys were 16-years-old. (Courtesy: Eli's Software Encyclopedia)

Ski Crazed sold about 1,500 units, netting them around $2 per copy. During the development of the game, the pair began moving away from crude tools like Pinball Construction Set, moving on to a program known as Take One. Since their computers were purchased by their parents, there was nothing to pay off or acquire; the money they earned could go into the next game. But there was one item in particular that they coveted, but couldn't afford: a hard drive.

When talking about the games they lost due to backup errors, Gavin and Rubin recalled a a guy down the street from them who had, in 1984, a then-unheard of 5 megabyte hard drive. It cost $24,000. "I remember seeing the first five megabyte hard drive and thinking, 'this guy must be loaded!'" Gavin said.

Ski Crazed sold about 1,500 units, netting them around $2 per copy.

But that guy wasn't loaded; he was a thief. "He had actually stolen it," Gavin continued, "which we didn't know at the time. He was like 14, too. He had done over $100,000 worth of credit card fraud. The FBI arrested him, actually. He didn't go to jail, but he got in deep trouble."

Instead of following a similar course, Gavin and Rubin utilized the tools at their disposal and the money earned from Baudville (which allowed them to purchase a precious second disc drive), and took the next step forward in their careers, crafting a trio of games quite unlike Math Jam, Ski Crazed, or anything they created before.

III. Electronic Artists

Gavin and Rubin didn't make an incredible amount of money from their deal with Baudville, but at 16-years-old, they were pretty content. Enough so that, for their next game, they would continue their partnership with the fledgling publisher on a game called Dream Zone. It would launch in 1987.

Dream Zone was an adventure game combining the genre's text-heavy slant with graphics that were quite advanced for the time. And it was the first game the guys created that didn't only run on Apple II; it also came to Commodore's Amiga platform. It's most akin, perhaps, to Myst, though it preempted that game by over seven years. "It was like Myst with bad graphics," Rubin said, jokingly.

Dream Zone was JAM's second game for Baudville. (Courtesey: Wikipedia)
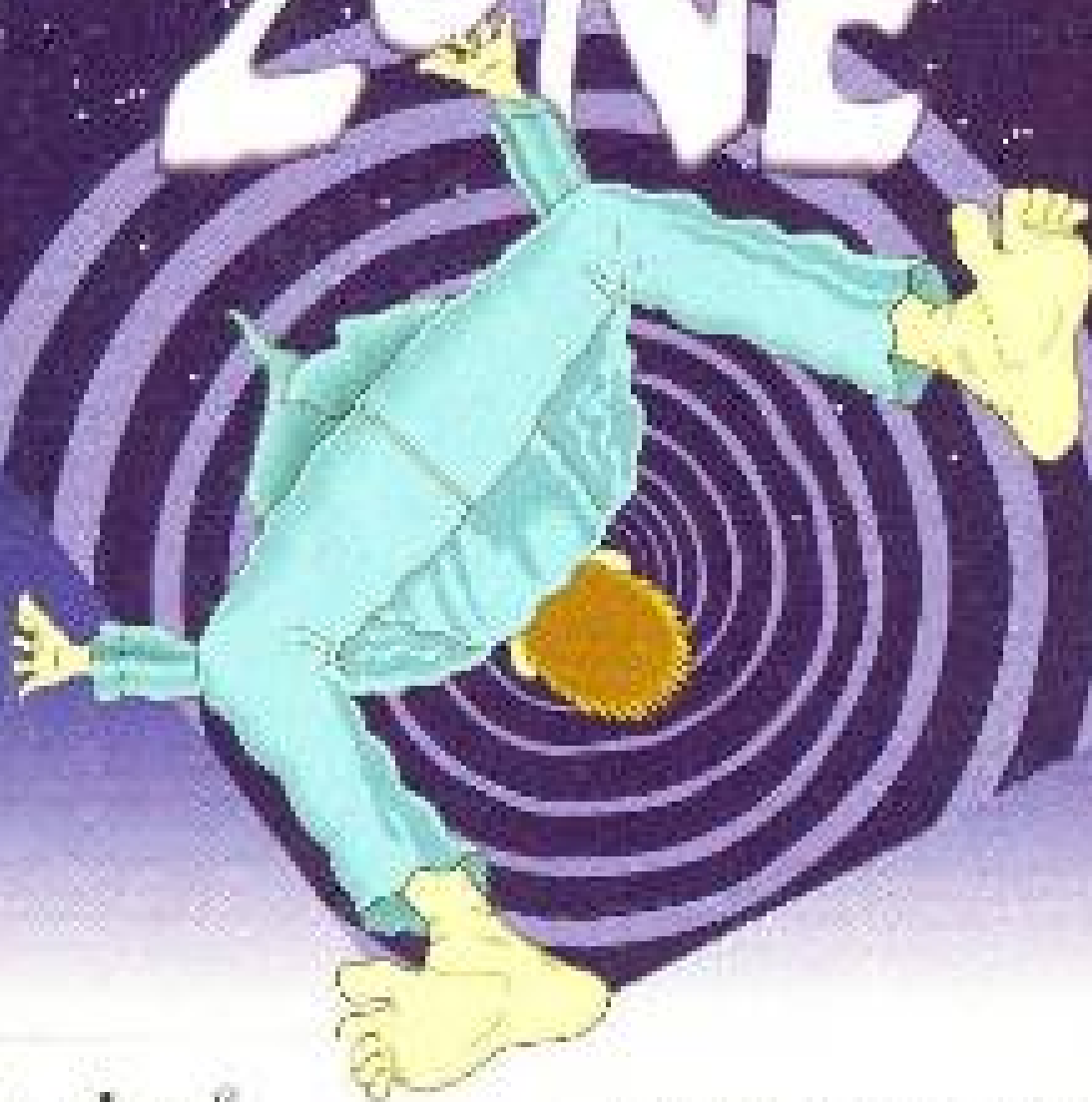
As its title suggests, Dream Zone was about... well, a dream. In particular, a "kid who fell into a weird dream. You were trapped in a dream," Gavin explained. "You went into dreamland through the toilet. It actually featured digitized graphics at the beginning. We did a weird Wizard of Oz thing where it was black and white digitized graphics when you were in your real life, and then it went into color, Jason-drawn graphics."

Have you played Crash Bandicoot?

| YES | NO |

Dream Zone was a modest hit for JAM and Baudville alike. The game sold upwards of 10,000 copies, earning the guys about $15,000 for their hard work. At 17-years-old, their success was exemplary, but they also wanted more for themselves and their games. And part of that, during their last year of high school, was to end their relationship with Baudville.

"Baudville wasn't much of a marketer and they didn't have very good distribution," Gavin explained. "[Dream Zone] wouldn't be in every store. So Jason and I were like, 'eh, they're too small.' We went up [to Michigan] and they were kinda stoners. Definitely one of the two partners was a serious stoner. Not that we saw it, but he was just, 'dude, mellow out.'"

[Dream Zone] sold upwards of 10,000 copies, earning the guys about $15,000 for their hard work.

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"That was going to be a recurring theme with Naughty Dog, which I still think pervades the building [Naughty Dog works in]," Rubin interjected. "We felt it was our destiny to be the biggest and the best. Therefore, any time we felt that there was

something standing in our way, such as our publisher wasn't good enough, we simply called the publisher, through their front line, and said, 'We're Naughty Dog. We should be working for you.' Although technically, at that time, we weren't called Naughty Dog."

As such, their next step was the boldest move they made up to that point. At 17-years-old, with three games under their belt, they cold-called EA –- Electronic Arts -- and asked them for a deal. Shockingly, when they called, they were put right through to the company's decision-makers.

Upon request, Gavin and Rubin shipped EA a copy of Dream Zone, which impressed the company. "'Stuff looks good,'" Gavin recalled the EA representative telling them. "'We'll send you a contract.'" They asked EA for $15,000 to make their next game, a paltry sum of money. On top of that, EA gave them 10 percent of each copy of their new game sold. This was at a time when EA, stressing the "Electronic Artists" moniker, were all about trying to treat the people who made the games like stars. It was the directive of EA's legendary founder, Trip Hawkins.

Unfortunately for EA, $15,000 wasn't enough money for Rubin and Gavin to make their next game, which ended up being an RPG called Keef the Thief. It cost more like $48,000 in the end, still a low sum of money in an industry that mostly had its costs in control, and could still make a profit even on games that didn't sell gangbusters. Gavin explained more about EA's situation at the time.

At 17, Gavin and Rubin cold-called EA, asked for a deal, and got one.

"Occasionally, [EA] had games that got cancelled or failed or whatever, but the thing is, you didn't have to sell very much to make money. They made a lot of money in those days. I mean, they still do today, presumably, but it's harder. Those days, they spent 50 grand on this game, and they sold it for $40 or $50. Maybe their wholesale was $20 or so. So they only had to sell a couple thousand copies, basically. If it came out, it broke even or made money."

Keef the Thief launched in 1989, and eventually came to Apple II, Amiga, and MS-DOS. It was the first game sold under the Naughty Dog moniker – a name the pair settled on during Keef's development -- and it sold a staggering 50,000 copies, making Gavin and Rubin a healthy sum of money. But it also gave them their first unsavory taste of the loss of absolute creative control, and it ultimately affected their vision for the game.

[Keef the Thief] sold a staggering 50,000 copies...

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It started out as a serious RPG, but EA insisted on making it funnier, even giving the guys a comedy writer. The comedy slant was compounded with cartoonish box art that didn't quite do the game justice. "The problem was, the marketplace wasn't fully prepared for a comedy RPG at the time," Rubin said. "It was funny. But it was an odd kind of funny. A video game writer writing comedy very early in the days of video games having comedy."

"It was sort of in the Groo the Wanderer, Sergio Aragonés school," Gavin concluded.

"It was a good game," Rubin insisted. "But it kinda capped out at a certain amount of sales. I remember EA saying to us that we probably shouldn't have gone with comedy, after the fact. That kind of stung me, because it was one of those things where we didn't have an opportunity to decide what was going on. We had already signed up, and they had the right to do this."

But even with those complaints, and even with a loss of creative control, Rubin and Gavin stayed with EA, and pitched them another RPG, one "much more ambitious" and more costly than Keef the Thief, according to Rubin. Its codename was Buccaneer, and they asked for $90,000 to make it. EA agreed, though that cost ballooned to $150,000 when all was said and done.

With Keef the Thief, JAM Software became Naughty Dog.

Buccaneer – which would eventually be known as Rings of Power – began development in earnest upon Keef the Thief's completion in 1989. But the game's creation was stymied by a very practical problem: Rubin and Gavin were now in college, and they lived in different states.

Their solution was to work all year long with the tools at their disposal. "We were one of the first telecommuters on the planet," Rubin recounted. "We were using first 300

then 1,200, then 2,400 baud modems to telecommute." He was attending the University of Michigan, and Gavin was in school in Pennsylvania, so there was no other options than to use their incredibly slow (yet, at the time, quite technologically advanced) modems to send information and data back and forth.

The situation changed when school was out. They would reconvene in Virginia during off-months and would toil away in Gavin's parents' basement. But even with an easier work environment over the summers, circumstances prolonged the game's development period. It was supposed to take two years, but it ended up taking closer to three.

Another thing that complicated development was the simple fact that Rings of Power was designed for PC, but ended up being ported to SEGA's follow-up to its failed console the Master System. It was called the Genesis.

During a visit to EA, the guys spotted Genesis dev kits. "There were these Genesises with ribbon cables sticking out of them, a hole cut in the top and a ribbon cable sticking out," Gavin explained. "The people at those were always turning off their monitors when anyone came into the cube area or whatever. I was like, 'hmm, that looks like some kind of Genesis development unit.' I kept asking about it, but no one would say anything."

We were one of the first telecommuters on the planet.

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It was Trip Hawkins himself that finally spilled the beans on EA's Genesis development, giving the guys an NDA to fill out. It was then that Gavin in particular learned about what EA was doing with SEGA's consoles, and why everything was so hush-hush.

"EA had reverse engineered the machine, and eventually, before coming out with their reverse engineered games, they made a deal with SEGA to get some kind of sweetheart rate." But this affected the development of early Genesis games for EA. "For a while, we had this really hacked-together machine, this steel box where they had taken apart a Genesis and grafted it to a bunch of other boards... It was

incredibly electronically noisy."

These makeshift Genesis dev kits would alter the signal of any electronics around it, which was at first frustrating, but eventually became a useful tool of development. "When you turned it on, all the TVs on the same electrical circuit started to spit and get a ton of noise on them. People would complain in my dorm about their reception. They didn't put two and two together. But it was totally the Genesis screwing up all their TVs. You could tell, in someone else's dorm room, even, what the Genesis was up to. When it crashed, the noise pattern would change. I could see how busy the graphics hardware was from the interference patterns. I would leave the TV across the room on because it was a useful debugging aid," Gavin said, laughing.
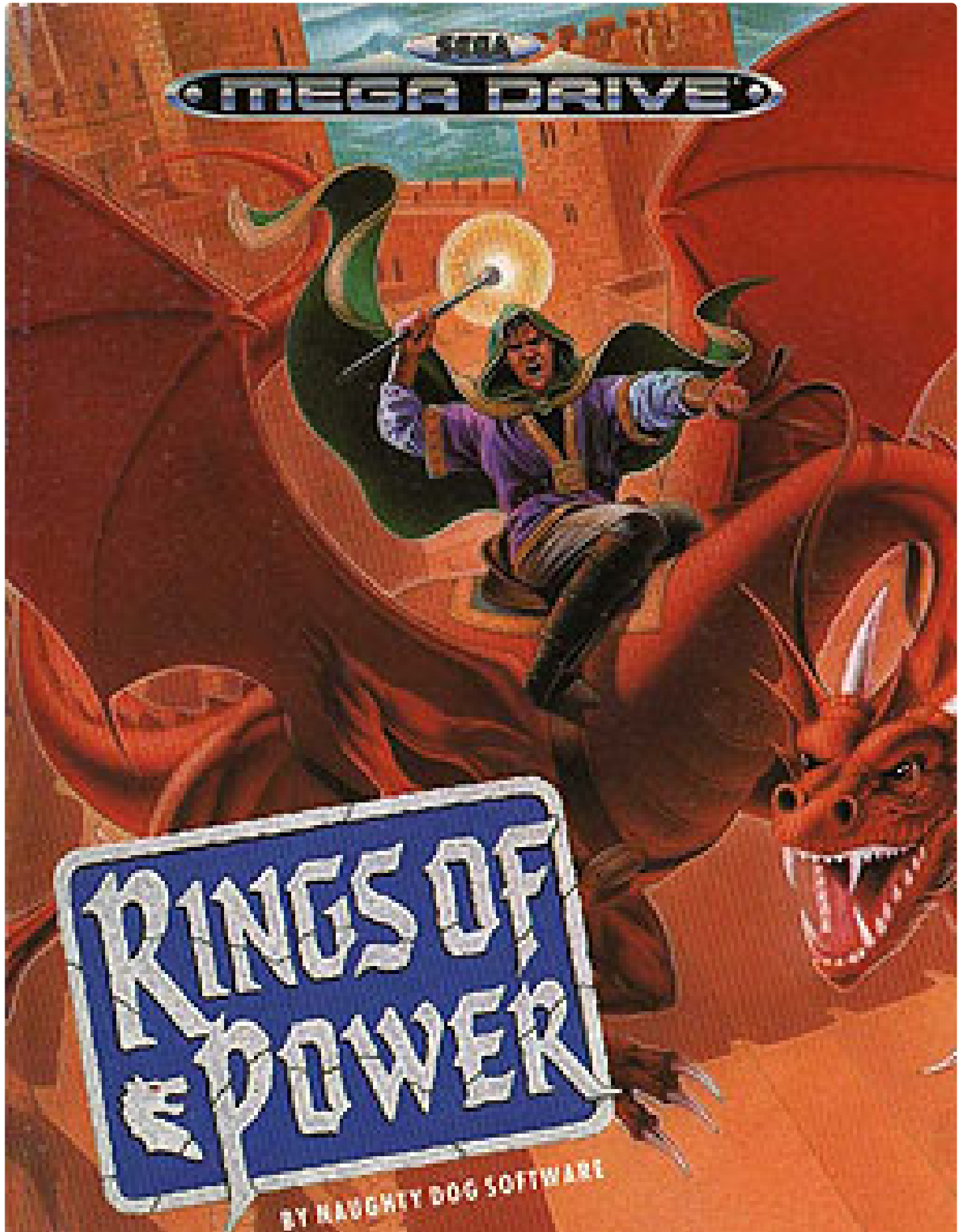
Rings of Power marked Naughty Dog's permanent transition to console. (Courtesy: Wikipedia)

Development of Rings of Power was complicated, but, as Gavin noted, this time marked "a very important transition" for Naughty Dog, as they went away from PC and towards console. Following that, they would never again return to their computer gaming roots. Because of this decision, Rings of Power wasn't quite up to snuff – "it should have been a PC game," Rubin insisted – but it did very well. It sold through its entire initial allotment of 100,000 copies in only three months when it finally came to Genesis in 1991.

But a phone call from EA cemented in their minds the harsh reality of working with the publisher, a publisher that had just gone public and was finding great success in other, easier-to-sell genres. "They called us and said, 'we have good news and bad news,'" Rubin recounted. "'Good news is, you're sold out. Bad news is, we're not gonna reprint it.'"

"They had this other game they thought was selling better," Rubin later continued, "and we had a very large cartridge memory size, which cost more, and we had an EEPROM to store a saved game, a battery. So our cartridge cost more and they thought they could sell out of the other one, so they printed the other game instead. That was Madden."

"So that was the second time EA had said, 'well, it would have been nice if we could have done better...'"

...our cartridge cost more and they thought they could sell out of the other one, so they printed the other game instead. That was Madden.

Sports games became synonymous with SEGA Genesis, and Naughty Dog got caught-up in the whirlwind at ground zero, losing out on greater success to a group of games that were an easier, cheaper sell. The sales guys at EA, according to Gavin, loved having sports stars around them all the time, and they understood and enjoyed sports games. It put a game like theirs at a disadvantage.

"You'd have John Madden on a poster bear-hugging some players or something. It's easy marketing, and you get to meet these famous guys. And all the guys [EA] hired were sports guys," Gavin said. "You'd be in the regular programming section of the building, and everyone would look like geeks. No offense, because those were our friends. But then you'd go over to the marketing section and everyone was larger and better dressed. They went to sports bars. They couldn't quote Star Wars. They didn't really know what to do with our weird game with dragons and magic rings."

"So we felt a little disenfranchised with the whole business," Gavin stated. "This was actually the only time in its history that Naughty Dog took a breather."

IV. Back From Break

Happy with the two games they developed for EA, but stung by the experience of losing creative control and not being fully supported by EA's marketing machine, Gavin and Rubin decided to leave the industry, at least for a time. On the verge of graduating college (they made all of these games before they even got a college degree), Rubin wanted to go to California to learn to surf, while Gavin decided to chase a Ph.D at MIT in Cambridge, Massachusetts.

Of course, neither of them got quite what they bargained for.

"I actually never got a surfboard and got on the waves," Rubin said. "I said I was going out there to surf, but I never did it, because I started a special effects company. That got me into 3D graphics." 3D was very new at the time, and the computers and programs required to do 3D graphics could run $75,000 or more.

Trip Hawkins' 3DO kept Jason Rubin away from the movie industry.

A prohibitive price point and the relative newness of the industry didn't stop Rubin from getting a contract for his company, though. That contract came from Columbia Pictures for a movie called Wolf, starring Jack Nicholson and Michelle Pfeiffer. "I got offered to do the morph into the wolf," Rubin said, "which was one shot. I was about to start it when 3DO called" in 1993.

Have you played Crash Bandicoot?

YES	NO

3DO was the brainchild of none other than Trip Hawkins, the founder of Electronic Arts that worked so closely with the duo previously. He was planning an ambitious and expensive CD-based console slated to launch in 1994. He called the guys with a tantalizing offer that quickly ended their hiatus and got them back into the business of making games.

"[Hawkins] called up and said, 'you guys, we're really great at pushing new stuff!'"

Gavin recalled. "'You want a dev machine? Just check it out. No strings!'" They accepted his offer.

3DO was the brainchild of none other than Trip Hawkins, the founder of Electronic Arts...

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"We hated the cartridge," Rubin said, talking about the software format running on everything from an Atari 2600 and an NES to the SNES and Genesis. "We wanted to make big games. We wanted to make games with saved games. We didn't want to have them say, "'we're only printing Madden.' Those things sucked about the cartridge."

Gavin expanded on the issue. "Even though the games brought in this huge gross – not as much as today, but a lot at that time – a lot of it was sucked up into cartridge manufacturing. They were really conservative about printing, because it took so long and the cartridges cost so much. If you got caught with extra cartridges, you could lose all the money you had made."

"That's a big change with CDs," he continued. "You could print them fairly fast, and if you got caught with extra inventory of them, it didn't matter so much. You might have to pay seven bucks for a CD later on. But essentially, the CDs only cost a dollar to make. The economics were different. No one was really out a fortune."

Way of the Warrior was Naughty Dog's 3DO fighting game. (Courtesy: GameTrailers Forums)

Indeed, Naughty Dog was at the forefront of the fight against cartridges at a time when many in the industry were attacking CDs for having long load times and for being prone to damage. But they swam against the tide, and the company ended up being on the right side of history, even if it didn't necessarily play out with 3DO.

They accepted Hawkins' dev kit, and subsequently agreed to make a game for 3DO. And they intentionally went into the development process without a publisher, using the money earned from Rings of Power to fund the new game. They used almost every last cent they had: $80,000.

They used almost every last cent they had: $80,000.

"A bunch of things happened on Rings of Power, and happened on Keef the Thief, that we really sort of resented," Gavin admitted. "We resented this process that EA had where you had to write the script and get it approved and basically design your whole game up front. We spent like a year on Rings of Power, or nine months or something, with this gigantic 300-page script, dickering over details in it and getting it approved. And then, in the end, when we actually made the game, no one looked at the script."

Designing on the fly was the "appropriate way to make games," Rubin insisted, though Gavin also noted that marketing was another major problem that made them want to flee from a publisher. In Rings of Power, "there were high tech and guns together. [EA marketing] was like, 'I don't know if we want to market to both of those. We've never seen that before. They should make it all one or the other.'"

Mortal Kombat was a major inspiration for Way of the Warrior. (Courtesy: Wikipedia)

"The truth is," Gavin said, "as we knew, the same guys liked fantasy and science fiction." EA wasn't interested in reading a 300-page script and game design documents, and frankly, Gavin and Rubin were far more interested in creating as they went then explaining their ideas up front. With Way of the Warrior, their 3DO game, they flew by the seat of their pants.

"Nobody's going to tell us why our broad call is wrong," Gavin later said about Way of the Warrior, because there was no publisher constantly looking over their shoulders. Self-funding also allowed them to be smarter with their money and time and go where the gamers – and the money – were. "We're gonna look at, before starting the game, what's hot now and what's a good bang for the buck development-wise and try to make the best game in that. To do a little more market timing. Our previous games, there was no market timing to them."

"They were just what Andy wanted to play or what I wanted to play," Rubin added.

[Naughty Dog's previous games] were just what Andy wanted to play or what I wanted to play.

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When Way of the Warrior's development began in 1993, fighting games were really hot. Street Fighter II, Mortal Kombat, and Samurai Shodown were tearing up the arcade and the living room alike. Way of the Warrior was going to be 3DO's fighting game, and it was to go up against the best Midway, Capcom, and SNK had to offer.

They felt it was a fairly easy genre to create a game in. "It wouldn't take us the three years the past games had taken us," Rubin said. "RPGs are just bigger and take a lot more time and effort." Fighting games, on the other hand, are very direct. You have your characters and you have your stages, and once the game is running – which didn't take much to do – all of the fine-tuning great fighting games required could be accomplished.

"All the [development] resources were put into two characters on screen. They're big. They got a lot of animation and a lot of moves relative to other games at the time, which had a different balance resource-wise," Gavin explained. "So we looked at this and we're like, 'that's a good bang for the buck.'... You make one background and one character, you play against yourself, and you've got a playable game. You could start

working out balance issues and play issues and stuff."

Prestigious university MIT was the backdrop to Way of the Warrior's development. (Courtesy: MIT)

Rubin and Gavin decided to take a "digitized direction" with Way of the Warrior, much like Mortal Kombat. "At some levels, it's kind of a slightly more comedic Mortal Kombat ripoff. It's very over the top," Gavin said. Their major inspiration was the droves of Hong Kong kung-fu movies they watched together.

To make the game, they knew they had to be in the same location again. Rubin tried to get Gavin to move to Newport Beach, California, but Gavin was still attending MIT, and he convinced Rubin to come to the wintery suburbs of Boston. Gavin acquired a subpar apartment for them to live in as they worked, and they went about the business of creating a 3DO game.

For the first time, they brought on

contractors to help them complete the game.

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They couldn't afford to get a traditional blue screen, so they bought a tan-colored screen -- practically a tarp -- and nailed it to the wall in their living room. It covered the only windows in the apartment, and it covered up their air conditioning vents, as well. Because they positioned it on a certain wall, since they lacked the proper lenses for their camera, it also complicated the act of actually filming.

To get shots against the screen, they had to open their front door and film from their hallway, which confused – and freaked-out – their academic neighbors that attended MIT and Harvard. Meanwhile, Gavin would stay up 'til all hours of the night working on audio processing. The two men mimicked the kung-fu "hiya!" sounds that would creepily seep out of their apartments as their neighbors tried to sleep.

But while Way of the Warrior was a game designed to be easy to develop, it became a project that was too big for them to handle. For the first time, they brought on contractors to help them complete the game. It was the last time Gavin and Rubin worked on a game by themselves.

World-renowned robotics professor Rodney Brooks is in Way of the Warrior. (Courtesy: Wikipedia)

"It quickly got to the point where, for the first time, two people couldn't make the whole game," Rubin said. Because of the fact that they didn't use a proper blue screen to get footage, it required them to laboriously cut out, pixel-by-pixel, the characters they filmed. They loved the look they got from their approach – they described it as a "Sin City" style – but they needed to get others to help them

achieve it by doing the grunt work.

"So we went out," Rubin continued, "and we put up, literally, on bulletin boards, for people to do this" cropping, cutting, and coloring. "We got people to come in and do the tedious part."

The folks they got to help them on Way of the Warrior were from all walks of life. One guy was a law student. Another was a Boston-area native who, after his experience with the game, ended up staying in the industry and still works on games today. And their lead tester? He was the Valedictorian of the Harvard class of 1994, a guy named David Liu.

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Liu's not only famous for his academic pedigree, or because of his early work with Naughty Dog. He was a prolific, professional Street Fighter II player. "He was one of those savant guys at Street Fighter who's just insanely good," Gavin said. Liu would even try to plug Way of the Warrior during television interviews about his time at Harvard, and was on wanted lists at casinos in Las Vegas and Atlantic City for card counting.

And then, there were the characters in the game. "The other thing is, the people we got to play in this video game were all friends and family," Rubin said. "We couldn't afford to pay anyone." One of the characters in the game was one of Gavin's MIT professors. He's Dr. Rodney Brooks, "who's probably the foremost robot scientist in the world," according to Gavin, and the head of MIT's Artificial Intelligence Lab. Another was a friend of theirs named Vijay, who had an MIT Ph.D in molecular biology, a post-doc from Berkeley, and is, presently, "gunning for the Nobel Prize in protein folding."

"He's the secret character in the diaper," Gavin said with a smile.
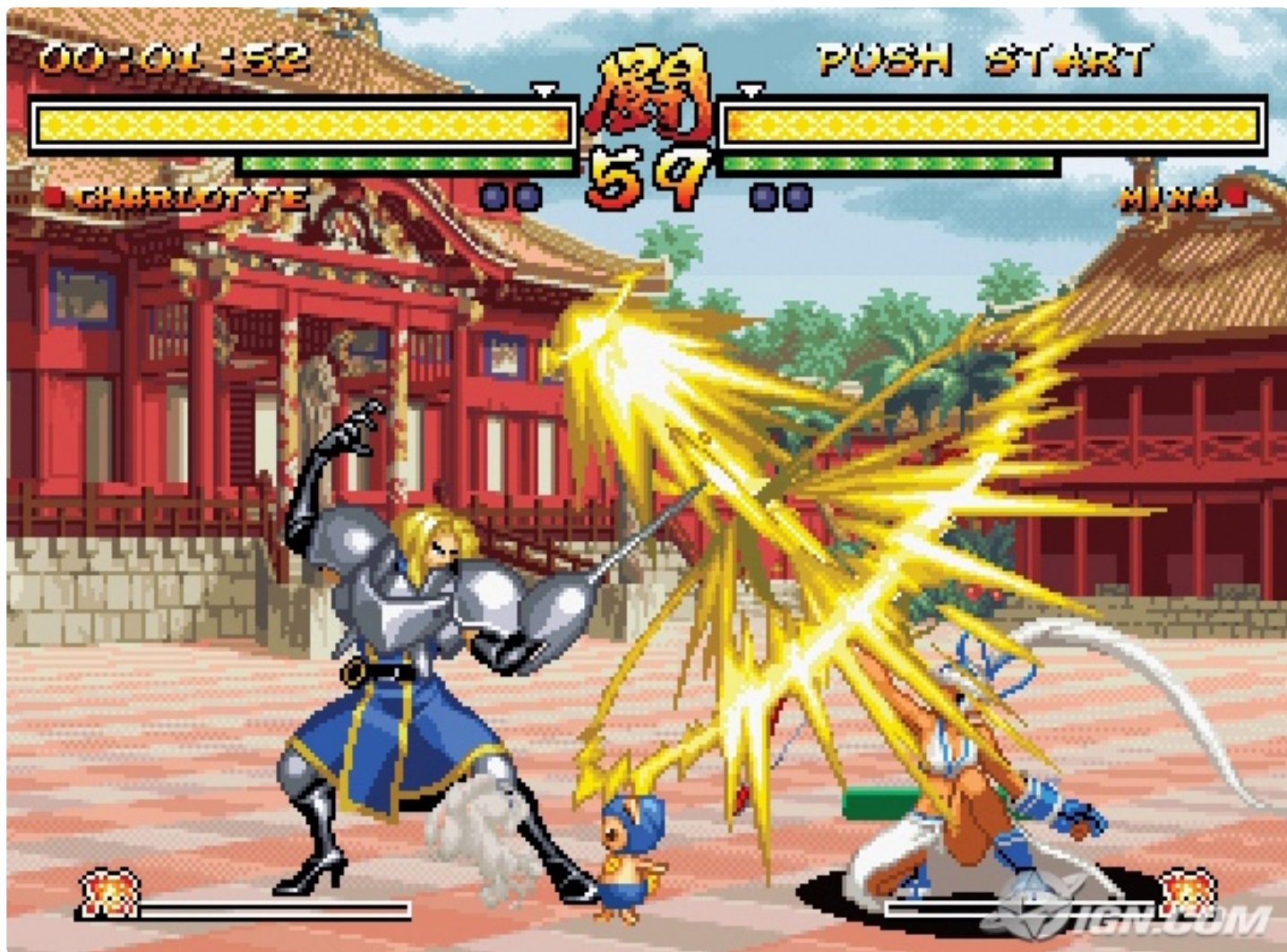
Way of the Warrior's engine was nearly used to port Samurai Shodown to 3DO.

They didn't only lack the funds to pay actors; they also lacked the money to give them proper costumes. Vijay wore a pillowcase as underpants, and another bed sheet as his turban. The jewel in front of the turban was "from a secondhand Jasmine dress-up kit for little girls. As in Jasmine from Aladdin," Gavin noted.

During production, the two nearly ran out of money. Rubin had $6.37 in his bank account. "I was eating ramen noodles with Andy," he recalled. Gavin had it just a little better; he was getting paid $14,000 a year to go through MIT's masters program. They sold their remaining belongings, like a stereo, to get by while they finished the game.

Andy's toilet froze and shattered. It was a disaster, okay?

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Their living situation deteriorated during these tough times. "Morgan, Jason's dog, lived with us," Gavin said. "She was this awesome black lab-ridgeback mix, but she shed a lot. We had this white wall-to-wall carpet. We had not vacuumed in an entire year. There was more visible Morgan hair on the floor than there was carpet. People would come in and look at the carpet and go, 'ewwwwww, what is with your carpet?' You could scrape hair and leave white streaks."

"Andy's toilet froze and shattered," Rubin noted abruptly. "It was a disaster, okay? We went all-in on this game, in the sense that startups go all in. We went all-in on this game. The last $10,000 that we had, effectively – although we didn't spend it last, it would have been our last money – we bought a three-by-three square foot spot at the 3DO booth at CES, because the game show was still at CES. Nine square feet."

Without a publisher, the idea was to show the game off at 1994's CES and perhaps drum-up some interest. And in their tiny, modest space, surrounded by "crap" multimedia games, drum-up interest they did. In fact, so much interest was drummed-up that a bidding war erupted over Way of the Warrior between three companies. All of them wanted a piece of Naughty Dog's project.

Crystal Dynamics almost acquired Way of the Warrior during CES.

The players were 3DO itself, Universal Studios, and Crystal Dynamics. "We came closest with Crystal Dynamics," Rubin remembered, "but there was a split inside Crystal Dynamics. Half of the people loved the game and wanted to put it out. The other half wanted to buy it and use the engine to make Samurai Shodown, which they had acquired the rights to... But they weren't going to tell us until they had licensed the game. Then they would tell us, 'you have only one chance now, and that's to work on Samurai Shodown, and that's the only way you're going to get paid,' effectively. We caught onto that."

Had we gone with 3DO as an exclusive, it could have been the end of Naughty Dog.

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Hawkins put the pressure on the guys to give 3DO the rights to the game using what they described as his endless charm and positivity, or his "reality distortion field." He "just had a lot of personal charisma," Gavin noted. "He's an incredibly nice and fair guy, too. Every business deal we had with him, he was extremely fair and generous. That was very refreshing to have a businessman who was always fair."

That was very refreshing to have a businessman who was always fair.

But they didn't know if he was painting an honest picture for them. "I used to put a pencil between my leg and the table we were sitting at, with the pointed end down, and jab myself every now and then, to remind myself not to fall under his spell," Rubin said. "He was an incredibly persuasive person." It affected everyone around him, including his employees, who seemed to hang on his every word.

"But Universal offered us to come on the lot to make additional games, to fund additional games, to give us creative freedom, and it just sounded a lot cooler," Rubin concluded. "Plus, I loved LA. It was, in the end, a better deal. For us, this was one of the big decision points. Had we gone with 3DO as an exclusive, it could have been the end of Naughty Dog."

Those games that Universal promised to let Naughty Dog make while giving them complete creative freedom would all fall under an all-new series Gavin and Rubin would come up with when driving across the country. That series would be known as Crash Bandicoot.

In 1995, Naughty Dog co-founders Andy Gavin and Jason Rubin were on the verge of something big. They just didn't know it yet. Following the creation of their lone 3DO game -- the fighter known as Way of the Warrior -- Gavin and Rubin were given a tantalizing offer.

As discussed [at the end of Part I](#), Universal Interactive Studios – the winner of the CES bidding war over Way of the Warrior – offered Rubin and Gavin a three game contract. Universal wanted to continue its relationship with Naughty Dog in the creation of a new game, but Naughty Dog didn't know what that game would be.

Little did they know they would end up concocting a new mascot for the fledgling PlayStation brand that would, for a time, outshine, outperform, and outsell Nintendo's very own Mario.

Disclaimer: Contains Profanity

I. A New Kind of Game

It took about a year and a half, and just about all of their money, but Rubin and Gavin's Way of the Warrior finally launched on 3DO in 1995. But their future didn't rest with the 3DO – which was only a year away from being discontinued after selling a paltry two million consoles – and they knew it.

Have you played Crash Bandicoot?

| YES | NO |

"Way of the Warrior came out. It was what it was," Rubin said, obliquely referencing the game's mediocre quality and soft sales. "But Universal said to us, 'pick a platform, pick an IP, pick a type of game, and we'll fund it.'"

Andy and I had what we always wanted, which was freedom, but also freedom with enough money to really do stuff.

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After a couple of years of hunkering down in Cambridge, Massachusetts, the duo got into a car and began driving to California, the home of Universal. During the cross-country ride, they began formulating their plans for their next game. Just as they did before making Way of the Warrior, the partners surveyed the gaming landscape to ensure they went in a logical direction. They wanted to again cater to what the market wanted, and not just themselves.

"First, we were like, 'what genre should we do?'" Rubin explained. "Character action games were some of the biggest games out there. Sonic and Mario. This was before the PlayStation was announced. So let's do one of those. If we can, we'll find hardware where we can be exclusive, because that had worked really well on 3DO."

Kurosaki speaking at Comic Con during Uncharted 3's development

And so, the nugget of the idea for [Crash Bandicoot](#) was innocuously born, though it wasn't at all fleshed out yet. Nonetheless, with an idea to work off of, Gavin and Rubin had to confront a glaring problem: who would help them make the game? They couldn't do it alone anymore, as the process creating Way of the Warrior proved. Even creating titles like Keef the Thief and Rings of Power taxed their time, and game development itself was moving into a different, much more complicated phase.

"Andy and I had what we always wanted, which was freedom, but also freedom with enough money to really do stuff," Rubin explained. "[Universal] said, 'first, what would you do to improve your development?' We said, 'we'd hire employees.' They said, 'do that.' So, for the first time, Andy and I had the ability to build our own company."

Two of the first people they hired were Dave Baggett, a personal friend from Gavin's days at MIT, and Taylor Kurosaki, an experienced visual effects artist working in the television industry. Kurosaki is still with Naughty Dog today, although he took a hiatus from the company during the latter Crash days and early Jak & Daxter days.

We were primarily doing work on a TV show on NBC called SeaQuest DSV, with Roy Scheider and the dolphin.

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"I was working at Universal Studios on the back lot, doing visual effects for a fledgling little division of [Amblin](#)," Kurosaki said. "We were primarily doing work on a TV show on NBC called [SeaQuest DSV](#), with [Roy Scheider](#) and the dolphin." Holding such a job was a considerable feat for Kurosaki, who was only 23-years-old at the time. Other than Babylon 5, SeaQuest was the only show on television doing CGI, and he was familiar with the early tools of the trade, notably [Lightwave](#).

"While I was working on that TV show, a couple of guys moved into the same building that we were working in on the back lot," Kurosaki continued. "That was Andy and Jason, who had just moved out here to LA from the east coast to start work on an

unannounced game. [This was] the first time they were going to be working on a game that was more than the two of them and some other buddies."

Kurosaki befriended Gavin, Rubin, and Baggett, playing Wallyball with them on the back lot and generally being happy that he could talk to some other 20-somethings. "We hung out socially, [and] they were really interested in what I was doing," he said. "Jurassic Park had just come out. The one thing I was envious of with Jurassic Park was that all those guys were using Silicon Graphics and PowerAnimator to do their visual effects, while I was using Lightwave."

Naughty Dog's new game would be heavily inspired by Donkey Kong Country.

"Andy and Jason had SGIs and were using PowerAnimator to work on this video game," Kurosaki concluded. "I was like, 'oh, I really want to learn this.' They basically just said, 'why don't you come work with us?' That's how I started at Naughty Dog."

Our first days of work were seeing these closed-door meetings showing the PSX, showing Ridge Racer on the PSX...

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Kurosaki's first day at work was January 5, 1995. He was Naughty Dog Employee #2 (behind Dave Baggett), and his first day of work coincided with CES in Las Vegas. He was "sharing a room with Jason and Andy at the Imperial Palace. [Naughty Dog artist] Bob [Rafei] and I were sleeping on the floor. Jason and Andy were sleeping in a king size bed together. Our first days of work were seeing these closed-door meetings showing the PSX, showing Ridge Racer on the PSX and us just going, 'what the fuck is this?' We were trying to figure out the game we wanted to make."

The game that would eventually become Crash Bandicoot was the result of trying to take advantage of a trend in the industry. Much like Way of the Warrior was created as a response to the fighting game craze, Crash was a product of gaming's move to 3D, and a result of approaching 3D gaming in a very specific way.

Virtua Fighter in action. (Courtesy: GameFront)

"Games were in a transition at the time," Gavin explained. "Certain genres, in the arcades, had just gone to 3D. It was clear that this was the direction things were headed, as the 3D hardware was coming out, but it was really early. The first one to go was racing. Fighting games were just beginning to go with Virtua Fighter."

Gavin and Rubin shared an affinity for side-scrolling platformers, and figured that if Virtua Fighter could put fighting games into a 3D mold, they could do it with the platformer. They specifically loved the Super Nintendo smash-hit Donkey Kong Country. "We were like, 'how would this work in 3D?'" Gavin continued. "It was a much more difficult question then, because it's a more open kind of game. We eventually had what we jokingly called the 'Sonic's Ass' idea." In other words, a platformer with a camera behind the main character that would follow him around.

Games were in a transition at the time. Certain genres, in the arcades, had just gone to 3D

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"There were three things we came up with" after deciding to create a 3D platformer, Rubin said. "One, just rotate it into 3D, but it's still side-scrolling. Two, go in and out of the camera, figure out how to do it, but keep it confined still, because it's still a platform game with a linear progression. Or three, full open. We didn't think we could do full open at the time."

Ironically, developers working on behalf of Sony, SEGA, and Nintendo all came to the same conclusion about 3D gaming. And each company chose a different course for their new respective system's flagship game, giving players a real choice while showing that the 3D landscape wasn't very predictable at all.

II. Sony vs. SEGA vs. Nintendo

The mid-'90s introduced the first true three-way battle for video game console supremacy. With Nintendo and SEGA going head-to-head with SNES and Genesis, it was natural that they would battle again with Nintendo 64 and SEGA Saturn. But Sony, too, would join the fray with PlayStation, a console that, at the end of the war, would end up outselling its competition combined nearly three times over.

This box entered the generation as an underdog. It would outsell its competition combined nearly three times over.

Still, there was one thing Sony lacked: a mascot. SEGA had Sonic, Nintendo had Mario, but Sony had nothing at all. With [Crash Bandicoot](#), Naughty Dog was about to change all of that, but Sony wasn't necessarily in the market for a mascot yet, and the small team behind the game had no idea their product even had that kind of potential. First, they had to figure out what their game was and how they'd actually go about making it.

Have you played Crash Bandicoot?

| YES | NO |

SEGA had Sonic, Nintendo had Mario, but Sony had nothing at all.

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PlayStation – like N64 and Saturn – supported full, 3D, polygonal games, but "those machines couldn't handle that many polygons" Gavin admitted. Dave Baggett figured out a way to get around the PlayStation's inherent limitations by, among other things, creating the DLE, or Dave's Level Editor.

With Gavin and Baggett, all was pretty well on a technical level, but Naughty Dog still needed to settle on a final idea to sit alongside its fixed-camera, behind-the-character approach. Thankfully, the team finally had the time and money to really sit and think. After keeping their heads down to formulate an idea, they once again went back to the idea of a 3D Donkey Kong Country. But they still needed a character concept.

"We weren't in school for the first time. For the first time, all of these things came together, and this became a real job with a real budget and real employees and real attention to detail," Rubin said. "The character design [of Crash Bandicoot] happened

over a long period of time. We used cartoon animators in Hollywood to come in and concept with us, Charles Zembillas and Joe Pearson. We had real concept design from them."

Looney Tunes was an inspiration for how Crash would ultimately look. (Courtesy: Dan-Dare)

"This whole camera-on-a-rail and pre-computing and throwing out all the stuff you weren't going to see [the game use]... it was crazy. It was super bizarre," Kurosaki explained. "We had an art staff of three people. It was Jason, Bob, and I. That was the art team. We were all just doing the same stuff" as the concept of Crash Bandicoot grew. "I think I made the first Wumpa Fruit."

"But as we started to figure out what we were good at, Bob became basically the background department. Bob did almost every background in Crash Bandicoot. Jason became the animation department. He did all of the animations. I became the game designer. We all pitched in for each other, but those were the different paths

we handled." And, together, they handled the design of Crash Bandicoot as a character.

For the longest time, Crash's name was Willy the Wombat.

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Donkey Kong Country may have been the biggest inspiration to the team from a gameplay perspective, but it was Looney Tunes that ended up being the biggest inspiration from a character design point-of-view. As Crash's design came into focus – complete with 532 polygons and the ability to be fully animated (as he lacked a fixed skeleton) -- he started to resemble something from Warner's classic cartoon series. But what about a name?

"For the longest time, Crash's name was Willy the Wombat. That's what we had settled on. No one really loved it," Kurosaki admitted, as he explained how he was "pretty sure" that he and Dave Baggett ultimately came up with the Crash moniker. "I wanted it to be Crash Wombat. To this day, I think Crash Wombat rolls off the tongue better than Crash Bandicoot."

Nintendo's Mario 64 and SEGA's NiGHTS Into Dreams were Crash's big 3D competition. (Courtesy: Wikia)

Meanwhile, Nintendo had something up its sleeve that would end up revolutionizing 3D gaming: Super Mario 64. SEGA, too, was working on its own 3D game for Saturn called NiGHTS Into Dreams. None of the first parties had any idea its competitors were working on 3D games of their own, ones predicated on each of the branches Rubin and Gavin identified during their road trip from Massachusetts to Southern California.

It was around this time when the idea of the game really started to come together, and Naughty Dog took the first steps toward solidifying its relationship with Sony. Today, Sony is seen as incredibly indie-friendly, but it was nice to smaller studios back in PlayStation's heyday as well. Sony would eventually rely on studios like Naughty Dog to make its console competitive, and Rubin and Gavin – as the co-founders of the studio – were the 44th and 45th individual developers to sign on with PlayStation.

Sony's realization that it needed a game like this was just in the nick of time…

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"Sony had this weird thing that very few people had where you could get a dev unit as an independent developer, under this different deal," Gavin explained. "You didn't really have any terms for getting manufacturing done, but they licensed you the right to do the development under the assumption that you'd find a publisher later." Even though Naughty Dog already had a deal with a publisher, the fledgling company was technically on its own, because that publisher didn't own them. This helped them gain easier access to the tools of PlayStation development without all of the paperwork, red tape, and, ultimately, oversight.

SONY

™

SOMPUTER

SCE identified Crash Bandicoot as its mascot.

"[Sony] figured it was a hacker thing," Rubin continued. "If you got to the point where you could actually develop [a game], you would take it to a publisher and then a publisher would have to review it... Naughty Dog was a contractor for Universal. Never working for them. So we developed on our dev unit, and at alpha, said to Sony, 'we've got your mascot game.' And Sony had never seen it. They knew everything that was of any value that was being worked on, but they had never seen [Crash]."

To show Sony what they were working on, the team used Kurosaki's connections with the SeaQuest DSV staff. He and Gavin sat in the TV show's editing bay for two days creating a demo to give to Sony. Gavin then handed the tape off to a friend, who he asked to "casually" pass it along to the higher-ups at the company. He did. "The head of [Sony Computer Entertainment America] was like, "'What is that?! That looks so good!' That's how it snowballed," Gavin recalled.

After seeing the tape, Sony "sent down people and they looked at it, and their jaws dropped," Rubin continued. Sony's realization that it needed a game like this was just in the nick of time, he explained.

We had no idea what Miyamoto was doing at the time.

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"[Sony] had come down, and sure enough – this is where luck played a part – SEGA had Sonic. In this case, they had decided to do NiGHTS. Mario, obviously, and Nintendo were coming on. Sony had no mascot. From alpha, two or three months

before E3, they kicked their number one product off the number one slot, right next to Nintendo's booth, and put Crash there. [Sony] signed a deal with Universal to be the publisher. It went head-to-head with Mario. The first time we had ever seen Mario 64 was at that E3."

"We had no idea what Miyamoto was doing at the time," Kurosaki said. "We had no idea about Mario 64. When that came out, we were a month away from finishing the game. We were like, 'oh fuck, that's badass. That's a whole next level.' But they couldn't do the density of environments that we were doing. It was a trade-off."

Crash and Mario went head-to-head. NiGHTS fell by the wayside. (Courtesy: Operation Rainfall)

That E3 solidified for Rubin that his gut instinct of there being "three ways of going" 3D was right. "2D, that was NiGHTS. Our middle of the road, in-and-out, but still platformer [was Crash Bandicoot], and full open world [was Mario 64]. We all chose one of the three ways of going."

"And it was very independent of each other, because we were all so secretive," Gavin chimed in.

"I didn't like the fixed 2D [of NiGHTS]," Rubin admitted. "That's a copout. I think

"I didn't like the fixed 2D [of NiGHTS]," Rubin admitted. "That's a copout. I think [SEGA] realized that and didn't do Sonic with it, because they didn't feel comfortable about it. The gameplay itself was weak." So, in reality, there were really only two viable options, because NiGHTS was proof that the third branch may not have been the wisest to take.

We went one way, Mario went the other.

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"We went one way, Mario went the other," Rubin said. "Mario 64 was an incredible game. The thing that makes Mario 64, from a consumer standpoint, perhaps not as competitive, is that visually it was nowhere near what Crash was. That was because as soon as you open up, you have a lot more polygons to draw in the distance. Just visually, it was never where Crash was."

"You can talk endlessly about which was a better game. From a consumer standpoint, Crash looked amazing, and that got us a lot of kudos. Now, on Crash One, reviews said, 'it's not Mario.' But we ended up selling more than Mario, partly because the PlayStation had more users, but also because it was a very good game. And we continued to outsell Mario through Crash 2 and Crash 3. CTR (Crash Team Racing) did extremely well. I think it outdid Mario Kart in terms of sales." [Editor's Note: Mario Kart 64 outsold CTR.]

"Mario had a bigger learning curve, too," Gavin interjected. "It was much more of a ground-breaking game in a lot of ways, because it had to innovate in so many gameplay areas. But it was a tough game to get your head around the first time. You had to get used to the 3D, get used to controlling the camera. The camera was very frustrating. That's been solved since, [but you had to] then figure out what the hell you're going to do."

The end result. (Courtesy: Wikia)

"Remember, this is the first time most gamers were experiencing 3D," Rubin said. "Certainly with a freely moving camera. Driving games were always free-roaming, but this was the first time anyone had to deal with this. Yes, gamers will always get it, but the mass market? The PlayStation was the first mass market [gaming] machine. They got Crash. It had a button to jump and a button to spin and the directions. It was

easier to play."

"Your short term goal in Crash is always very obvious," Gavin noted. "It's just move forward and stay alive. In Mario, it was like, 'well, what do you have to do here? You have to open a drain and flood this' or whatever. It was kind of hard to figure out at first. It was brilliant in its own way, and the way they communicated that without any real language, but there was definitely a steeper learning curve."

It's obvious that the free 3D world of Mario 64 became very important. It's also easy to discount Crash's world.

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Ironically, Kurosaki notes that he thought that Crash was too hard. "Way too hard," he said of the game. "I feel so bad... this was, again, the first video game I had worked on, and I had never done game design, but I was the lead game designer in a department of one... I had no concept of increasing the difficulty and then allowing the player to play at that difficulty for a period of time. No concept. In my mind, literally every single jump was slightly harder than the one that came before it. I watched my mom play it, and I just said, 'please, play Crash 2.'"

"It's obvious that the free 3D world of Mario 64 became very important," Rubin admitted. "It's also easy to discount Crash's world. But if you look, Field Runner, which is an extremely popular game, is a forced forward left-right jump gameplay mechanic that directly takes from our hog level in Crash 2. It's identical gameplay. We were the first in-out 3D game, so there's no question that it descends from us, because nobody else was doing that kind of stuff at the time."

III. The Rise of a Mascot

Crash Bandicoot launched exclusively on PlayStation in late summer of 1996. Sam

Thompson, a long-time Sony producer, joined the company the next year. He started

in QA, working as a junior tester on games hailing from studios ranging from Square to Psygnosis (later named Sony Liverpool) to 989 Sports. He later rose up the ladder and now works exclusively with Naughty Dog on Sony's behalf, but when he started at Sony, it was Crash Bandicoot that got him through the door.

It's interesting, because Sony never really wanted to have a mascot. They want to put the brand first and foremost...

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"When I started, Crash was the fucking game for me," he said. "I was playing games full time at that point. It was bad. I had a pretty massive addiction. It was right around the time the PSone was in full swing." Serendipitously, when Thompson was testing at Sony, he was assigned Crash 2, right around the time when Crash Bandicoot was going from a one-off project from a relatively unknown developer to the biggest thing Sony had in its arsenal. "When I had the opportunity to work on [Crash] 2, it was awesome," Thompson quipped.

"It's interesting, because Sony never really wanted to have a mascot," Thompson explained. "They want to put the brand first and foremost: the PlayStation. Everything was secondary to that. Yet, we had these mascots... where it was either Parappa, Crash, a few other characters mixed in that I don't even remember anymore."

Have you played Crash Bandicoot?

YES	NO

These two games sold some 14 million units combined. (Courtesy: Wikipedia)

But Crash wasn't only a hit with the Sony executives. It was a hit with gamers around the world. "Crash was the first game where Sony had found a western-developed game that was critically and commercially successful in Japan. That had never happened before," Thompson said. "For Crash to sell more than a million units in Japan was a huge deal. That was the one defining moment where the promise of what western development could be was finally attained."

With huge sales around the globe, PlayStation's future largely hinged on the success of series like Crash Bandicoot. And things changed a bit. Sony and Universal didn't get too involved with Crash's development – and its potential trajectory as a series – until, as Kurosaki explained, "it was clear that this was going to be a hit and it was clear that Sony really needed this game."

For Crash to sell more than a million units in Japan was a huge deal.

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"Again, we were just going to be another game on PlayStation," Kurosaki explained. "That's all we knew. I think we just caught lightning in a bottle or whatever and then they were like, 'oh, you're our mascot.'"

Unfortunately for Kurosaki, Universal and Sony's increased interest in the Crash Bandicoot series interrupted a schedule for a possible sequel that he and the rest of Naughty Dog had settled on.

"The only thing that changed," he explained, "[was that] we had always planned that Crash 2 was going to come out two years after Crash 1. I had already done all this work, while we were finishing Crash 1, this whole list of features I wanted in Crash 2 that we didn't have time to implement. Like the camera being able to turn around, a whole bunch of different move sets for Crash. Way expanded mechanics." Kurosaki had ideas for things that wouldn't even make it into the series until the third game.

In the late-'90s, Crash's Q Score was through the roof.

Indeed, Crash Bandicoot became so big "that somebody said, 'We need another

Crash for next year," Kurosaki recalled. And so, he left the company. "There were six

of us working on this game, pretty much. I think it was seven by the end. It was a slog. I just wasn't in the mood to turn around and crank out a bunch more levels." He wouldn't come back to Naughty Dog for seven years, during the development of Jak 3.

Kurosaki's exit was no doubt injurious to the development of Crash Bandicoot 2, but the company kept on, and Crash grew significantly. Naughty Dog tracked Crash's meteoric rise with something known as the Q Score. "Superman and Batman are always up there," Rubin said. "Mickey Mouse, whatever. In the 13 to 18-year-old range, Crash was ahead of Mario for a while. Crash had its time."

Crash's success also changed Naughty Dog's relationship with its publisher, Universal, and its console partner, Sony. "[Universal] had given us money to do the first game. By the time the second game came around," Rubin said, "Sony was funding it. We were making it. Universal was just pushing through the money. They would get it from Sony, sit on it for 90 days, and then give it to us. We would spend it."

Sony was funding it. We were making it. Universal was just pushing through the money.

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"There was really no use for Universal," Rubin continued, "with one exception, and I have to be very clear that this is very important. Mark Cerny was an incredible talent, and we were working with him continually on these titles. But Mark didn't really feel like he was part of Universal, either. He was vice president of Universal Interactive, but he was really at Naughty Dog."

Sony even started to mess around with its own, internal platformer based on the success of Crash. "Because Universal owned Crash, before Sony bought Naughty Dog, Sony thought that in case Crash went away, they needed to have an engine that

could do what we were doing," Rubin said, "and they actually internally started working on a 'Crash Killer,' they called it, that was eventually Harry Jalapeno, believe it or not."

Today, Mark Cerny's working on PlayStation 4. Back then, he helped bring Crash Bandicoot to the world.

Naughty Dog also ballooned in size throughout the creation of the Crash games, though it stayed small compared to today. Eight people in total made the original Crash Bandicoot. Somewhere between 16 and 19 people at any one time were toiling away on Crash 2. That grew to 23 for Crash 3, and in the low 30s for Crash Team Racing.

During Crash's ascent, Mark Cerny left Universal and contracted with Naughty Dog directly. "So we continued to work with him, but not through Universal," Rubin said. "By the time we got to Crash 3, there was no reason for Universal to be up in the mix. But they were making a huge amount of royalty." Cerny is, today, best-known for being a higher-up at Sony Computer Entertainment and the chief architect of the PlayStation 4.

I came into the studio and I was like,

'these are the guys who did Crash?'

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Crash Bandicoot 2 – subtitled Cortex Strikes Back – launched in November of 1997, and it was huge. Huge enough that Naughty Dog's growth and upward trajectory managed to bring in new, experienced talent. One of those people was an artist named Erick Pangilinan. He's still with the company today, last acting as the Art Director on The Last of Us.

Pangilinan was Naughty Dog employee 13, and was brought on during the development of Crash 2 in 1997. "I came from SEGA at that time," he said. "That was when SEGA Saturn was just losing it already. SEGA was getting rid of people." He noted that many of the higher-ups at SEGA and Sony (and elsewhere) were switching sides, and companies were "spending money on games." Lots of it.

He interviewed all over the place – including at established developers like Square -- and Naughty Dog was the "last stop" on his tour. He remembers everyone at the company being in one room. "All the furniture didn't match. Everyone had their tables flush around the room. There was one round table in the middle, and the carpet was filthy, because they had a dog there, and in the evening they'd throw [Tommy Burgers](#) down there and the dog would scarf them up."

'these are the guys who did Crash?'

Saturn was the beginning of the end of SEGA as we knew it. (Courtesy: Wikipedia)

He was, at first, unimpressed. "I came into the studio and I was like, 'these are the guys who did Crash?' Coming from SEGA, which was like a resort, this mega studio, SEGA would fly us out to parties. We'd get our own rental cars. Five of us would fly somewhere and each got their own rental car. Then we'd upgrade. And it was just to get from the airport to SEGA, all of us in these sports cars, spending money left and right. Then I went to other studios and everyone ran it the same way, movie industry style."

By the time we got to Crash 3, there was no reason for Universal to be up in the mix. But they were making a huge amount of royalty.

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"Then I went to Naughty Dog, and I saw this studio," he continued. "My interview was,

I think, at 8pm. The studio was still full, which was different from other studios.

Everyone was gone by six. But this place, holy shit, they were still working... It was still buzzing. Everyone was still shouting at each other. This was a no-bullshit studio."

Pangilinan said he made what felt like a "counterintuitive" decision to go to a smaller, humbler studio like Naughty Dog. But he did. "[SEGA] was such a resort," he explained. "I felt like a number. By the time they made the decision to fire everyone, you were nothing. Just a number. I worked my ass off, and that was it? 'Yeah, see you later.' I just didn't understand that. I came here and it looked like family. This was the team I wanted to work with, because there was no bullshit."

He also respected the knowledge of the people who worked there, right up to the leadership. It wasn't common at other companies to have co-founders like Rubin and Gavin in the trenches, with all of the knowledge – and more – that their employees had. "You could go to other companies, I met all their presidents," he said. "You could bullshit them. They wouldn't know jack shit. But here, the bullshit won't go very far."

IV. A Lasting Legacy

All told, Naughty Dog created four [Crash Bandicoot](#) games, though it only had a three game contract with Universal to fulfill. The third game, Warped, and the fourth, Crash Team Racing, were released in late 1998 and late 1999, respectively, and the series continued to see great commercial and critical success. Indeed, Crash was as relevant as ever, but Naughty Dog's relationship with Universal began to become burdensome.

[Crash has] become lost in the shuffle...

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"It's unfortunate in a lot of ways that Universal then became what Universal was, and [then] Vivendi, and then eventually sold it off to Activision... [Crash has] become lost in the shuffle, because it could have been one of the great characters of all-time,

based on where it was in 1998 or 1999," Rubin said, while recounting just how popular his creation was.

These games would be the last time Naughty Dog had anything to do with the Bandicoot. (Courtesy: Wikipedia)

"It was the top of the world in terms of characters. There were Pizza Hut giveaways. The Australian Surfing Commission, their entire policy for kids' safety was done with Crash. The TGV train going from London to Paris had Crash on it. If you got off a plane in an airport in Tokyo, there was a giant Crash room. Crash was becoming huge. Unfortunately... Universal, as a company, became less and less relevant as time went on." Crash's future was out of Naughty Dog's hands; they didn't own the character, and neither did Sony.

Have you played Crash Bandicoot?

YES   NO

CTR we also self-funded. Gave it to Sony with blockheaded characters and said.

'God, this would be a great Crash game...'

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But the company still cared enough about Crash that it would proceed with passion projects on its own. Crash Team Racing was one such game. "CTR we also self-funded. Gave it to Sony with blockheaded characters and said, 'God, this would be a great Crash game, but you know our relationship with Universal.' So Sony went to Universal and cut a deal so that could be a Crash game." But that ended up being the swan song of Naughty Dog's relationship with Universal, and its time with Crash Bandicoot.

"It was weird," Pangilinan recalled. "We were funded by Universal. We were at the Universal lot. But you always had this feeling that Universal didn't know what the hell to do with us. They were a movie studio. It just felt like they were passing the discs to Sony. Sony was the publisher. It was a weird relationship where we were Naughty Dog, but then who's this Universal guy? The partner we really wanted to be with was Sony."

"The problem was, Crash was owned by Universal," he continued. "It was this weird situation where we didn't know our identity. We knew we were Naughty Dog, but where did we belong? We weren't owned by anyone. Jason and Andy ran the show."

Industry veterans from Connie Booth to Shuhei Yoshida worked on Crash Bandicoot, but it was Mark Cerny – once again – that brought Naughty Dog out of its relationship with Universal. "Mark was the guy that held it all together," Thompson explained. Ultimately, "He was the one that was instrumental in convincing Jason and Andy to walk away from Universal and walk away from that deal. They knew the future and the direction they wanted to go. They weren't going to be able to do it with that partner in place."

Universal, then Vivendi, then Activision oversaw the decline of Crash. (Courtesy: Wikia)

None of [the people at Universal] knew game design or game development. They had no idea.

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Crash Team Racing would be the last Crash game Naughty Dog would work on. For the next-generation consoles on the horizon in the late-'90s, future Crash games would be handled by other studios at the behest of the company's actual owners – ultimately Activision – and its fall from grace would be as brutal as it was sudden. But old-school Naughty Dog employees still look back fondly on Crash Bandicoot and what he meant to the studio, to PlayStation, and to the gaming community.

"[Universal] liked having someone who was as capable and as accomplished as Mark [Cerny] running this, allowing them to just kind of unplug. For the most part, it was their interactive motion pictures division," Thompson said. "None of them knew game design or game development. They had no idea. They just knew that this was generating income. They knew that they had a stake in it... What they did to that franchise when Naughty Dog left it... They truly didn't understand what they had and how they should mature that franchise and take it into the next generation... Universal was, for the most part, just a stepping stone."

These days, Crash is no more. (Courtesy: Wikia)

"People dug it," he noted. "People really liked the game, liked the characters. Back then, there was not a real emphasis on gritty photorealism. It was all about character-based games. Mario had benefited so much from those days, and every other classic game we could remember. I think consumer expectations for what gaming was at that time was still very bright and innocent."

"People would take it at face value that you were playing as a bandicoot, or playing Spyro the Dragon, or Sly Cooper... But it was important to Sony, tremendously important, to have that brand identity," Thompson said. "If you think about Sonic, that was SEGA's and still is SEGA's core flagship. Mario has always been there for Nintendo. We've never really had that one mascot. For several years, it was Crash. He was huge."

THE HISTORY OF NAUGHTY DOG
PART III

Left disenchanted by their experience with Universal, Jason Rubin and Andy Gavin floated towards the 21st century wondering what was next for the company they founded nearly two decades before. Naughty Dog created Crash Bandicoot, but it didn't own him, or any of the games he starred in. Crash could have stayed as big as he was – and perhaps still be relevant today – if they retained even a modicum of control.

Likewise, Sony itself felt burned, not by Naughty Dog -- which delivered four high-quality, best-selling games – but by Universal, which controlled the IP. Indeed, Sony threw the weight of its money and prestige, as well as its considerable marketing machine and the name of the PlayStation itself, behind Crash. Yet by 2002, what was considered a PlayStation-exclusive would be on competing machines. Both Sony and its trusted development partners' hands were tied, and they had no choice but to move on.

After shipping Crash Team Racing in 1999, Naughty Dog began toiling away on a concept that would ultimately become Jak & Daxter, the studio's contribution to PlayStation 2's impressive roster of exclusive games. But business intervened for both Naughty Dog and Sony, and before either side knew it, the parent company of the PlayStation brand and the House that Crash Bandicoot Built were on a very welcome collision course that would tether the two sides together for good.

Disclaimer: Contains Profanity

I. Going First Party

"CTR was the hardest project I've ever worked on," Jason Rubin said. "Andy, my tried and true partner who had been through everything with me, was working on Jak."

"I was 20 feet away, but mentally, I was on a totally different thing," Andy Gavin interjected.

The situation at Naughty Dog was becoming untenable as development moved from PlayStation to PlayStation 2, largely because the studio was growing, the money necessary to make games was increasing, and the pressure on the two founders of the studio was mounting. It was at this time that they considered, for the first time, selling the company.

Kelly looked at me and Andy and said, 'so when are you guys selling the company?'

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"Around [the time CTR came out], we went to Tokyo. We were sitting there with [Game Informer's] Andy McNamara, Andy Reiner... and Kelly Flock. Kelly used to run SCEA, basically. We were really drunk in the Lexington Queen at maybe four or five in the morning. Maybe six in the morning. I remember it being light when we came out."

The five men were drinking overpriced Jack and Cokes, talking about the state of the industry, Sony's and PlayStation's future, and, inevitably, what would come of Naughty Dog.

"Kelly looked at me and Andy and said, 'so when are you guys selling the company?'" Rubin recalls. "And I said, 'why would we sell the company?' We were on top of the world, right? He said, 'because you made the number one game. There's no where to go but down from here.'"

The post-Crash days were exhausting for Andy Gavin. (Courtesy: All Things Andy Gavin)

"That kind of hit me with the alcohol," Rubin continued. "And maybe it was the fact that CTR was killing me. But there was actually kind of a point here. You sell things at their high, right? That didn't necessarily mean we won't be able to do more, but things were getting harder. Games were getting a lot more expensive... It got to the point where you couldn't afford to fund your own game as a developer."

Moving from PlayStation to PlayStation 2 hit Rubin and Gavin like a ton of bricks. They were accustomed to funding their own projects, going all the way back to the

They were accustomed to funding their own projects, going all the way back to the 1980s, but it just wasn't possible anymore. Jak & Daxter required $14 million to make – a fairly paltry sum by today's standards – but that doesn't take into account that Gavin and Rubin each put $2.25 million into its development, accounting for about a third of Jak's overall cost.

There are very few independent developers that are really killing it in the way that Andy and I were killing it in the Crash days.

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"It was very clear that it was getting out of hand. So we couldn't fund games ourselves," Rubin admitted. "We were going to become more reliant on publishers. Once you become reliant on publishers, being independent becomes less cool."

Rubin threw out the names of still-successful independent developers like Epic and Valve, but "There are very few independent developers that are really killing it in the way that Andy and I were killing it in the Crash days." Cash cows like Candy Crush and Clash of Clans, he opines, were simply not possible back then.

"You were either on console or PC, and all those games were going to be $15 million and up. So we saw that coming. We knew we were going to be close to the publisher. We had an incredible relationship with Sony…" Rubin said. "Sony always let us chart our own course, always let us make the games we wanted to make, and they paid us really well as a company."

"So what was the difference for us?" he later continued. "[It was] taking risk off the table and getting in bed with such a good partner, when we knew that in the future we wouldn't be able to develop on our own anyway. Sitting there and realizing that, yeah, there's nowhere to go but down, and even being number one wasn't going to be as good as it was from a financial standpoint, because of where the industry was going. It all just clicked."

Jason Rubin feared the risk of funding games himself. (Courtesy: Game Informer)

Gavin jumped in. "Also, I had this feeling. Each game was like riding a brand new rocket ship that was patched together with duct tape. But it's under 200,000 G's of thrust. You're strapping duct tape on. Is it gonna hold? They're all like that. It's still like that. You have this feeling that, like with the rocket, it's utterly catastrophic. If one piece of tape flips off and one tile goes, you're going to [explode like Space Shuttle] Challenger. It's all over."

"Also, as the number of employees grows, there's this sense of restraint. You're like their parents in a way... There was this crushing sense of responsibility for them. You gotta keep it all together. If we [make a] mistake or one flop, the whole thing is gonna just fireball. The sale [to Sony] takes that risk off and buys them security."

Gavin and Rubin listened to Flock in Japan, but were so confident they'd end up holding onto Naughty Dog that they bet him a case of Lafite-Rothschild wine – worth thousands upon thousands of dollars – that they wouldn't sell. "He collected," Gavin said with a laugh.

Naughty Dog was sold to Sony while Jak & Daxter was still in pre-production, as the studio was still convincing its publisher that this new game was a good idea worth funding. "They're saying to us, 'we love it. We want to work with you guys forever,'" Rubin said. "'But here's the thing. Look what happened to Crash... We don't control it. We put a huge amount of marketing into Crash. We made Crash into this massive thing... We're not going to do that again with your title that you own and watch it go to a competing platform out of our control. So we want to work with you, but we want to have that control.'"

This is probably one of the most successful acquisitions, probably in both directions, in the history of the game business.

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Gavin and Rubin answered, in kind, that there would be "financial ramifications" for such a move, because if they didn't own Jak & Daxter, they'd lose licensing rights, the ability to do a movie, and more. The only way Sony owning Jak & Daxter made sense to Naughty Dog's co-founders and Sony itself was if Sony simply purchased the studio outright.

"They said, 'write up a document with what you think the company's worth and we'll

talk about it.' Unfortunately, when I wrote up that document, they accepted it without negotiation," Rubin explained with a laugh. "Which tells me that either they're as generous as I always thought Sony is, or I underbid. Based on what's happened, I underbid, but who knows?"

"This is probably one of the most successful acquisitions, probably in both directions, in the history of the game business," Gavin said. "Here it is... years later, and they're still making world class games. It's even gotten better. They're still exclusive. The same basic management is here. The corporate culture is intact and not absorbed. It's so frequent that these things just all fall apart a few years later."

"See EA," Rubin said, referencing the many closed, discarded, or forever altered studios the massive publisher left in its wake.

"There's just nothing left," Gavin continued. But with Sony, Naughty Dog didn't become weaker. It became stronger, more solid, and more reliable, especially because a lot of the people running Sony's PlayStation brand at the time – like Kaz Hirai – were known quantities to Naughty Dog, and vice-versa. Shuhei Yoshida was also an intermediary between the two sides. Even the lawyers, marketing people, and PR were familiar enough to Naughty Dog for such a move to be comfortable.

Sony purchased Naughty Dog when Jak & Daxter was under development.

"The finances Sony can put behind a game took away a lot of the risk and the fear off of management," Rubin admitted. "That allowed management to take risks. Not crazy risks, but risks that they couldn't take with their own money... That's why this company, unlike a lot of other companies out there, is still creating content that's so different, unique, and individual. They have both the backing of a publisher with big pockets, and the freedom to do what they think is right without a lot of second-guessing from a marketing department or from external producers or some sort of oversight committee or anything like that."

"This company still operates like an indie, but it has the power of Sony behind it. We could see that was going to happen, so selling wasn't scary to us."

But [Sony] trust[s] us. They're like, 'oh, you're not going to go scratch my Ferrari. Go ahead and drive it. I know you'll bring

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Gavin and Rubin officially sold Naughty Dog to Sony in early 2001 for an undisclosed amount of money. And true to the co-founders' word, very little has changed at the studio since that time, according to those who were there for the transition.

"[Sony] got much more involved with the company, but they were still fairly hands-off in comparison to a lot of other companies," Naughty Dog's cinematics lead Josh Scherr said. "They knew that we had been successful with the Crash games, and they didn't want to kill the goose that laid the golden eggs."

"As soon as I started [working at] Naughty Dog, everyone was like, 'oh, you're working for Sony,'" Environment Artist Reuben Shah remarked. "But Jason Rubin, when I started, said 'No, you're working for Naughty Dog. We're a wholly owned subsidiary of Sony.' That's how we still treat it, and I think that's how they still treat us. They kind of leave us alone. We're able to produce what we can."

"We're like their kid, basically," Art Director Erick Pangilinan said.

"Right. But they trust us. They're like, 'oh, you're not going to go scratch my Ferrari. Go ahead and drive it. I know you'll bring it back nice,'" Shah answered, laughing. "We usually do, right?"

II. Hero and Sidekick

At its core, Jak & Daxter was designed with the spirit of Crash Bandicoot in mind. But it was meant to be bigger, better, and more open-ended. It was also meant to be accessible. That was a key tenet to Jak's success. But a mixture of old talent that worked on Crash Bandicoot and new talent that would be culled from other places both inside and outside of the industry would be required to help make the idea into reality.

Josh Scherr, who came to Naughty Dog in February of 2001, was a member of the core team that built Jak, and remains at Naughty Dog to this day. But at the time, he had just entered the gaming space from the feature animation industry. It was when he was working on a pitch for a 3D Mighty Mouse film for Nickelodeon that he found himself looking for a job at the studio that made Crash Bandicoot.

Josh Scherr's influence on Jak & Daxter was significant. (Courtesy: Wired)

After taking a grueling day-long exam to test his animating chops ("I was sweating like Albert Brooks in Broadcast News," he recalled), he found himself hired. He was

like Albert Brooks in Broadcast News," he recalled), he found himself hired. He was Naughty Dog employee #33.

"In terms of directive, one thing we were trying to do internally was that we wanted to create a title that not only had broad appeal to many different age groups, but also to many different cultures. To that end, that's where a lot of the anime stylings of the characters were coming into play." In addition to its Japanese-styled art, Jak's name – which is South African – was originally suggested by Scherr, and is another example of the series' multicultural slant. "One thing that wasn't in place when I arrived were the character's names," he said. "All the art everywhere just said 'Hero and Sidekick.'"

"It's funny," longtime Sony producer Sam Thompson said when asked about the origin of the series. "For Jak & Daxter, it was always Jak & Daxter. The character hadn't been completely locked-in. The design, the ears, things like that. Then what Daxter was. But in my recollection, Jason and Andy, they always knew. Everybody knew. They wanted to do a third-person open world action adventure game that's entirely character-based. This is what they wanted. It was never something that they wavered with."

I was sweating like Albert Brooks in Broadcast News.

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"I remember early on, even the first concept videos, Jason was so passionate about the size and scope of the world," he continued. "You could tell it was connected to his design philosophies with Crash. It was just this extension of that current philosophy, blown to a whole new proportion. You had this wonderland of tools and toys you could play with. It was their version of a sandbox. And it worked out really well."

Naughty Dog Co-President Evan Wells expanded on these ideas. "We knew we wanted to do a character action game. I remember spending some time at the dog park with Jason [Rubin] kicking around ideas. We were inspired by the success of Final Fantasy at the time, the Japanese influence. That was one of the big things. We wanted to replicate the success that Crash had in Japan, because back then it was a huge part of the market."

"A lot of the stuff we were working with at the time was trying to combine the western and the Japanese influences to create a new game. I think that's where a lot of the inspiration came from. And also trying to hit the different demographics. We were going to have a teenage boy, but then we wanted a sidekick for some humor. We were piecing together bits of the formula from Crash that worked and then turning it into a free-roaming 3D action platformer. It was rough."

Naughty Dog first caught wind of PlayStation 2 when making Crash Bandicoot 3. "The PS2 was starting to be developed and we were talking to Sony about what it would be capable of," Wells recounted. "The [SEGA] Dreamcast was out and we were excited about what we were hearing. We couldn't wait to get our hands on hardware."

Video Review

2:44

Autoplay setting: On

"I think because of the success of Crash, they wanted to get us the earliest prototype PS2 hardware they could," he continued. "At the time, they couldn't even import the machines. It couldn't get through customs. It was this supercomputer. It had to be searched and made sure that you're not using it for nefarious purposes or something. They actually had to sneak it in. They sent us to the airport and we had to drive over into some weird warehouse and pick it up and take it back to the office."

Difficulty arose during development due to the jump from PlayStation to PlayStation 2, which was extreme, according to Thompson. "You're dealing with a lot of questions and not a lot of answers," he noted. "You don't have final tech in some cases, you don't have final firmware. You're dealing with a brand new engine. You're dealing with the PS2 architecture, which is extremely advanced compared to the PS1. You have larger team sizes, larger budget. The scope of the project is 100 times what [Crash Bandicoot 3:] Warped was."

It was really hard to get the engine up and running on the PS2.

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"It was really hard to get the engine up and running on the PS2," Wells later said. "We thought we could continue to do games every year like we had done on the PS1. We thought we could have the game come out a year after CTR. Six months in, we're like, 'okay, we can barely even render this thing at one hertz.' At that point we knew [Jak & Daxter] was going to be a two-year project."

Indeed, Jak & Daxter's second year of development wasn't exactly smooth, either. The game ran poorly, and the team, according to Wells, "was trying to find what was fun about [the game]. It's very different going from a linear game like Crash to exploring a fully free-roaming 3D camera game."

Technology aside, further difficulty was met due to the studio's desire to tell a more meaningful, interesting story in Jak & Daxter, something Naughty Dog actually

wanted to do with Crash Bandicoot, but couldn't due to technical limitations.

"When we were designing Crash, we had animated sequences that would drop right into the game... We utterly failed to get any of that into the game because the hardware couldn't handle it and we didn't have the budget or the time to do it," Jason Rubin said. "But the idea was always there. As time went on with Crash, more and more plot. When we got to Jak, we said 'now is our time.' Jak 1 has plot at the beginning, actually in-game movie stuff. This was revolutionary at the time."

Jak & Daxter was heavily influenced by Crash Bandicoot... at least at first.

"This was the first attempt to introduce more of a story into the games," Scherr said. "The Crash games had stories, but they were fairly simple, shall we say. 'So-and-So's been kidnapped! Dr. So-and-So had done this again! Save girl, or save world.' That kind of thing. [We] wanted to try to get a more interesting mythos developed with the Precursors and the world and the eco and everything like that. To do that, [the powers that be] decided that they wanted to use cutscenes."

Scherr was up to the task, and he helped shape and guide the way Jak & Daxter's story was told. "One of the things I noticed when I first got in is that... The animation was great, but they were still very video gamey, and by that I mean there was no real cinematic language being used. Essentially, everybody was talking directly into the camera. The camera would stay on them until they finished talking, and then they would switch to the other person who was talking and do exactly the same thing over

would switch to the other person who was talking and do exactly the same thing over and over."

The guy who was the sound designer at the time basically came right out and said how he felt the game was terrible and how none of us knew what we were doing...

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"I started not to do that," he continued. "I started trying to do some actual cuts and moves and things like that. Some people thought it was cool, and some people thought it was actually making it feel like less of a video game, in a bad way. 'This is a video game convention. Characters talk to you directly through the screen.' That was actually the source of some little fights I had in C&Cs with some people."

C&Cs, in Naughty Dog nomenclature, are Comments and Criticisms, and they persisted from the beginning of the Crash Bandicoot era all the way through Jak X. "After the business of [any given] company meeting was taken care of," Scherr described, "we went around the table, and if anybody has anything to say about anything, this was your chance to openly speak about it." These meetings, as you may imagine, weren't always nice.

"I remember my very first C&C meeting," Scherr recalled. "The guy who was the sound designer at the time basically came right out and said how he felt the game was terrible and how none of us knew what we were doing and we all really needed to rethink the entire approach. That was an interesting introduction to the Naughty Dog corporate culture," Scherr said, laughing. "He left about two months later."

Scherr's vision for Jak won out, but there were some issues. "You go back and look at the first Jak, you'll notice that the cutscenes are very much a mishmash of these styles. Most of them were mine, the more cinematic language-y ones, and in others they're just talking to you."

And then there's the small matter of release timing. Jak & Daxter was delayed by a month in order to clean the game up.

"We had to delay the game past Thanksgiving [2001]," Wells said. "It was a really awkward time to ship the game. We wanted to get out before Christmas, but we needed that extra three or four weeks to ship the thing. It was a scary project. But it was a reflection of Naughty Dog's culture. We won't ship a game that we're not proud of. We won't ship a game that doesn't hit the mark on all the different disciplines."

"And when you see the end result, a few more weeks made a huge difference," Naughty Dog Co-President Christophe Balestra interjected. "It would be a shame not to be able to polish the game... Evan was pointing out, 'everyone will forget that we were five weeks late.' Five weeks out of three years, it's not that much. But if we ship a game that's not good, that's gonna stay forever. That was the kind of decision we made."

It would be a shame not to be able to polish the game... if we ship a game

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Sam Thompson elaborated further. "Obviously, when you're working on something new, you're iterating a lot. You're losing probably 70 percent of what you make on the cutting room floor. Either you had to rewrite it or you've gone with a different rendering solution or a different code solution. The game mechanics have changed, the AI has changed, these sequences are no longer valid. It happened with The Last of Us. It happened with Uncharted. It happens all the time."

"You build something [and] the current scope of design says 'this,'" he continued. "But by the time you get there, you probably built it five times over, and then you realize it's not going to work in the context of the story, or you just don't feel like it's where it needs to be. This whole thing goes, and then you have to figure out how you connect the dots to make up for losing that."

Thompson specifically discussed the original Jak & Daxter's development, identifying it as "hectic" and noting that the original schedule was slipping through their fingers. "The Precursor Bot, the last boss fight in the game, I believe went in 48 hours before final," he said, chuckling. "I think we had a day to tune it before it went into the can."

Because of the fact that games back then were more sequentially developed, as opposed to being developed around the needs of the publisher, marketing, PR, and other groups, Thompson suggests that the beginning of Jak & Daxter may feel tighter and more deliberate than the latter parts of the game, since sequential development allows more fine-tuning on what's done first. "But it works," he said. The ramping of the game's difficulty towards the end, perhaps a product of stunted development, "feels natural," Thompson concluded.
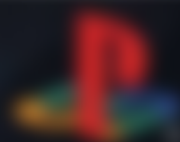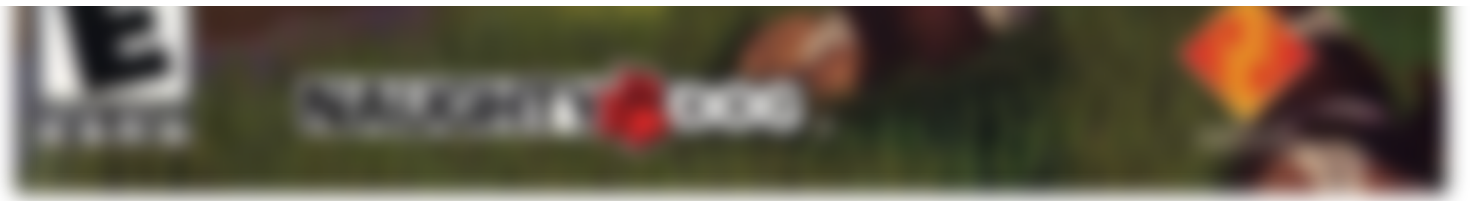
And so the trilogy began.

Jak & Daxter: The Precursor Legacy launched exclusively on PlayStation 2 on December 3, 2001 in North America, and it was a home run for Sony's new console around the world. Indeed, unlike many American games today, Jak & Daxter – like Crash Bandicoot before it – was a huge hit in Japan. But the franchise would start to evolve, beginning with its sequel, due to changing trends in the industry that necessitated a new look at what Naughty Dog was putting out.

"Jak was revolutionary for us," Thompson proudly noted. "And then the next year and a half, we started to see titles like God of War and Killzone… Everything started to change. You had Grand Theft Auto III coming out. All of a sudden, it's about real worlds, photorealism, gritty stories, a lot more violence." Jak & Daxter had none of that.

"Near the end of Jak 1 was when Grand Theft Auto III came out," Scherr said. "While we were trying to finish the game, we were all sitting around in the lounge trying to rack up a five-star rating as quickly as possible. If you played Jak II, that set off some light bulbs in Jason's head. Jak II, we really went all out in terms of the ambition. Everybody pushed everything."

The team began to formulate ideas for a sequel as soon as the original shipped, as they retreated as a group to Mammoth, California for a much-needed vacation. In addition to its added scope, Naughty Dog wanted to emphasize storytelling in Jak II even more than it did in the first game. "I wanted to start pushing the cinematic language in scenes," Scherr notes. "Again, there was a bit of a fight at the beginning, but I think once everybody started seeing how much more effective it made some of the scenes, I think everybody started following along, which I think ultimately helped the project."

The cinematic of Jak being tortured, as

the camera cranes up and all that stuff... we were really making movies now.

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Music and sound were also important, according to Scherr. "You go back and play Jak 1, there would be the most dramatic scene in the game playing, near the end, with Gol and Maia confronting Jak at the citadel. But what's in the background is whatever music happened to be playing in the level. It'll be, 'I am going to destroy you all!" and in the background is [calypso music sounds], or whatever the music is."

"Yeah, that undercuts it a bit," Scherr continued. "There's not additional sound. There's nothing else to help sell it. There were more, shall we say, spirited conversations with Jason about needing to spend some more money on this stuff."

"It's just kind of funny," he continued, "because I remember having an argument with Jason about the opening of Jak II where the giant Precursor warp gate thing goes up in the sky, and the thing is flying out. He was watching it and saying, 'this is all happening way too slow. This isn't exciting.' And I was just like, 'get some music in this. Get some audio in this. I promise it will make those [issues] disappear.'"

"That was an abbreviated version of the very long and loud argument I had with him over that particular thing," Scherr said, laughing. "At the end of it, we put it all in and everything started falling into place. We just continued to push that thing. One of the big philosophies we were trying to go for there was story as reward... You get through this particular section of the game, you get to see more about how the story unfolds."

Taylor Kurosaki, who left Naughty Dog after the original Crash Bandicoot and returned to the company in 2004, jumped in. "The cinematic of Jak being tortured, as the camera cranes up and all that stuff... we were really making movies now."

Jak II and Jak 3 began to reflect industy-wide changes happening during the franchise's development.

"With Jak II, it's almost written like a movie," Andy Gavin said. "The story integration got a really serious push. It has an elaborate plot and all these in-game cutscenes. They're not movie stuff, not FMV. They're just a part of the game. We tried to interweave it with the game so you're really playing the story. It's not some weird multimedia thing."

Jak II launched on October 14, 2003 in North America. "There's a fair amount of debate as to the quality of the final game. I know some people love its scope and the breadth of all the different activities you can do. Other people feel that it was just way too spread out, lost a lot of the charm, or lost a lot of the platforming stuff, anyway," Scherr admits. "I think one thing everybody can agree on, though, is that that game is just way too fucking hard."

The sales were horrendous for Jak II in Japan.

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Unlike the debate over the quality of the game, there's no debate on how it performed, at least in Japan, where Naughty Dog previously found a strange level of success for a western developer. "Jason felt strongly that we should make the move to a darker play in Jak II, which completely alienated Japan," Thompson recalled. "The sales were horrendous for Jak II in Japan."

"But that was the decision we had to make," Thompson conceded. "Jason and Andy specifically – and this is with all of the stakeholders at Sony buying in as well – they had to mature this franchise if they wanted it to compete long term."

Jak 3 -- which launched barely a year after Jak II did, in November, 2004 – was a reflection of the series' continued evolution. Just like Grand Theft Auto III heavily influenced Jak II's direction, Jak 3 was influenced by another Rockstar game, Smuggler's Run. "Jason was playing that, and he's like, 'hmm,'" Scherr remembers. "All of a sudden, there's a lot of driving in buggies and desert sands in Jak 3."

"We like our influences," he admits. "We look at what some other games are doing, and if we feel it's appropriate for what we're doing, we'll see if we can incorporate it and put our own spin on it. That was also kind of the philosophy on Jak."

III. An Unusual Culture

During the Jak & Daxter trilogy's development, the size of Naughty Dog continued to balloon. As we already know, the growing size of the staff and expectations of their production caused Andy Gavin and Jason Rubin to sell the company to Sony, but throughout the trials and tribulations of PlayStation 2 development, the corporate culture remained very much the same. It was loose and unorthodox. It was – and is –

culture remained very much the same. It was loose and unorthodox. It was — and is — a single-minded meritocracy, but one with its own, unique flair.

Lead Environment Artist Tate Mosesian learned this first-hand when he came to Naughty Dog in 2002, during the time Jak II was under development. Mosesian graduated from art school in 1991 and immediately jumped into the game industry, working for the likes of Disney and Western Technology, and later for Capcom and Crystal Dynamics.

By 1999, Mosesian found himself as one of 11 founding members of Sony Santa Monica, the Sony-owned studio that is today best known for the God of War franchise. "Probably seven or eight people from [989 Studios, where he was at the time], and then maybe another four or five, started the Santa Monica Studio," he recalled. He worked on some projects that never saw the light of day before eventually scoring a job at Naughty Dog.

Have you played Crash Bandicoot?

YES   NO

Santa Monica was "going to start working on this ridiculous gladiator game that I had no interest in working on," he said, laughing. "Then come to find out three years later that it was God of War. But I was okay, because I had shipped Jak II and Jak 3. That was some consolation."

What impressed Mosesian the most is that Naughty Dog got things done. "To be quite honest, they shipped games," he said. "When you put two, three years into a game, you want to see it on the shelves. You want to be able to tell your parents and your friends to go down to Toys 'R' Us and say, 'I did that.'"

"There was something tangible when you walked through the door and sat down to start working," he later said. "There was never any doubt that what you were working on was going to be finished and it was going to be good. I can't really explain it. I just came in and was assigned a level. That level had made consistent progressions and everything was very professional regarding the production of the game."

[I was] going to start working on this ridiculous gladiator game that I had no

interest in working on. Then come to find out three years later that it was God of War.

Other things weren't quite as professional. Quite the opposite, actually. "Everything else was total chaos," he admits. "The studio itself was not what I expected at all from a company like Naughty Dog. But the work ethic and the focused direction very much was. If you walked into that studio back then, you would scratch your head and say, 'this is the studio that made [Crash Bandicoot](#)?'"

The studio was "disheveled" during the Jak & Daxter period, according to Mosesian. "There were a lot of people strewn around. There wasn't any real organization... It just didn't seem like that triple-A studio from first impression." Mosesian didn't even have a computer waiting for him on his first day. On the second day, one was at his desk, but it was covered in food and stains.

But the lack of a stringent corporate culture didn't bother Mosesian. "Well, yes, it would have been nice to not have to clean spaghetti sauce off of my keyboard," he humorously admitted, "but it was nice to be working in a studio that did such great work, but also maintained this crazy garage mentality. This bunch of guys just working on something awesome. That was actually really cool."

The unique horizontal structure was also something that Mosesian needed to become accustomed to. "While there was a flat hierarchy, there was a king. That king set the law. Then everybody else filtered into the positions of leadership… We benefitted from the pros of having leaders running departments, but didn't have to suffer from the meetings and bureaucracy and paperwork."

"Things just got done. It was because things got done that I was never worried. The first day I started working, my sense was that this was a machine. It's got one goal, to make an awesome game and deliver it on time. Everyone who needs to know what they need to know knows it. You also got the sense, very quickly, who were the people to go to when you needed to know something. It made it much nicer. There was no intimidation factor. There was no knocking on doors. All doors were open. The presidents, the owners and founders of the company, were working just as hard as I was, if not harder."

…it would have been nice to not have to clean spaghetti sauce off of my

keyboard, but it was nice to be working in a studio that did such great work.

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Art Director Erick Pangilinan described this do-good-work culture as something that's embedded in anyone who works at Naughty Dog and managed to survive. Indeed, "crunch" – the time developers work insane hours to finish a project – is part of Naughty Dog's DNA, for better or for worse.

"I think we got famous in the industry for crunch," he said. "It's true. In a negative way, maybe. Everyone I talk to tells me that everyone at Naughty Dog has to crunch and work really hard. That's true. But it's also your passion for excellence. You have to make that sacrifice. There is a balance with family and stuff, but the people who go here commit to that. You want to make the game an excellent game. That's why you're here."

Interestingly, while crunch is part of the culture, it's not forced upon anyone. Yet, everyone stays and crunches regardless. "We don't mandate crunch," he said. "I personally don't force people to crunch. You're here on your own."

Environment Artist Reuben Shah jumped into the conversation. "I've never gotten an e-mail saying 'you better be here these days or these hours!'"

"You'll never hear that," Pangilinan answered. "'Come in on Saturday' or something like that. You'll never hear that. Everyone is here by choice. I guess it's also peer pressure, knowing where your level stands and knowing that the guy next to you has another level and it's looking amazing. It's more the feeling that you don't want to let the team down. It's all about ownership."

"We give a pair – a modeler and a texture artist – one level. That's theirs. They'll be judged on that level. So there's tremendous pressure on those guys to make their level awesome. You don't want to be that guy: 'Oh, this is an amazing game, except that one [level],' or, 'Oh, it's made by that guy and that guy, it's gonna suck.' You don't want to be that guy. Everyone has this pressure. 'Oh my God, I'm here at Naughty Dog, I can't let these guys down. They won't eat lunch with me. They'll talk shit about me.'"

"You just want to be part of that team. You want to be part of that elite," he continued. "That's the only bragging rights you have, because as you probably noticed, we don't have a strong hierarchy. There's not a lot of vertical progression in your career, except ownership of what you've done. It's the amount of work that you can contribute and give to the game. That's your portfolio."

"That's the reason why there's very little politics, too. We don't emphasize that structure. We emphasize what you do in the game. It's all about focusing on work and what you've done and how the team sees you as a resource. That's how you're measured. How important are you to this company?"

Oh my God, I'm here at Naughty Dog, I can't let these guys down. They won't eat lunch with me. They'll talk shit about me.

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"It's a testament to the games we make," Shah interjected. "We typically make pretty good games, and I think that comes from the passion and self-empowerment we have, to make ourselves better artists, better designers, better programmers, to push the ball forward and make innovation happen every day."

One thing that surprised Shah when he began at Naughty Dog was the accessibility

of everyone in the company, from the highest people all the way down to the lowest.

"Early on, I remember I had to go talk to Andy Gavin, the lead programmer, the second-in-command with Jason. [Someone] said, 'just go talk to him.' Something about the blend shapes. We needed to get blend shapes working in the game. I'm like, 'really? I'm gonna go talk to him?' I felt stupid. This guy is like the smartest motherfucker in the world, and I had a one-on-one with him. It was amazing."

"Because you're used to structure, you're used to hierarchy," Pangilinan suggested.

"Exactly," Shah answered. "I wasn't supposed to go to The Boss. I was supposed to go to my lead or my supervisor and take it up and maybe I'll hear something back in a week. No, it was that day. Go talk to him now. We have to figure it out today. It was in the game by later that night. That was really refreshing. That's how it works? Awesome."

"You compare that to a lot of the corporate places around here," Pangilinan said. "You could get fired for something like that."

"Right," Shah responded, laughing. "'Why is Employee #38 talking to me?'"

Reuben Shah's experience at other jobs incorrectly painted his expectations of life at Naughty Dog.

Josh Scherr also recalls looseness during the Jak & Daxter years, an environment that stressed creative freedom. "I know the animators loved it," he said, referencing this ability to do what you thought was best for the project. "Essentially total creative freedom to make their own little mini-movie... for the most part, everyone had free rein to be creative on every aspect of their production. I know for a lot of the

animators, Jak was the golden era in that regard. It was all keyframe. There was no motion capture. You had that freedom to create your own stuff."

Audio Director Bruce Swanson also came to Naughty Dog from outside of the industry, and was equally staggered by its unique culture. He started at the studio in 2002. "This is the first and only actual video game studio job I've ever had," he noted. Before Naughty Dog, he worked in the more traditional realm of television and film.

"At the time that I met some of the Naughty Dog people, I was working at Warner Bros. on the lot in Burbank. Naughty Dog would come over there frequently to use the facility, use the ADR stage, the foley stage, to get sound design and that kind of thing." Swanson befriended a lot of the Naughty Dog staff from the Crash Bandicoot days, and it would help him get a job there later on.

"At one point – I think it was over the summer – I got a call from Jason Rubin, and he said, 'hey, how would like to actually work at a video game company?' And I said, 'uh, I don't know, how would I?'" Swanson laughed. "But he made it sound really great. It was an interesting challenge, because he says, 'look, you get to come here and make it up. You get to make up how it's going to work.' That was appealing to me."

I know for a lot of the animators, Jak was the golden era... You had that freedom to create your own stuff.

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"It's structured," he continued, "and there's plenty of opportunity to be creative, but I could tell this was sort of an emerging industry. It had been going for quite a while before then... The production values in the games were starting to get closer to things that were like animation or film. So it seemed like it might be an interesting challenge. I went for it."

According to Swanson, it was the uncanny ability of Naughty Dog's leadership at the time to find just the right people to come into a culture that, by all accounts, is a

strange and demanding one. "They're really great at picking people that are fairly autonomous or fairly self-starting. I had to learn what they do, but it didn't vary so greatly from what I was already accustomed to that it was that big a thing."

This self-starting, hard-working, anything-goes garage culture may have persisted at Naughty Dog through the Jak & Daxter era – as it does to this day – but one thing had to change: its leadership. Towards the end of Jak & Daxter's run, the two founders of the company would seek their exit, and find two very talented and capable men to take their place and continue Naughty Dog's tried-and-true traditions.

IV. Heavy is the Head

Today, Naughty Dog is run by two men, but their names aren't Andy Gavin and Jason Rubin. Instead, the power at the top is split between Evan Wells and Christophe Balestra, two industry veterans that have been leading the charge since the days when Uncharted was in its embryonic planning stages. They are known as Co-Presidents.

Gavin and Rubin are the ones responsible for hiring the men that would ultimately replace them, but their meteoric trajectory wasn't by design. Both Wells and Balestra were smart and talented, but no one knew just how smart and how talented they were until they were at Naughty Dog, in the trenches, toiling away on the Jak & Daxter series and impressing just about everyone they came into contact with.

"I've been doing this for half my life now. I started [in the industry] when I was 20. Maybe I shouldn't put this on the record, but now I'm 40-years-old," Wells said, chuckling. His extensive talent and experience aside, the story about how Wells found himself in the gaming industry is one of the great stories of the industry. "It's one of those breaks into the industry that you can only dream of," he admits.

Reveal Trailer

1:21

"I was playing games all summer long. I went to Blockbuster and rented games. I was in college. This was my freshman year. Just playing as many games as I possibly could. I finished Toe Jam & Earl, which was a feat in itself. A pretty hard game to finish. The credits roll, and I see that the first name up there is Mark Voorsanger."

Have you played Crash Bandicoot?

| YES | NO |

"That's a pretty uncommon name, and I happened to be on the same gymnastics team as a Conrad Voorsanger. He was in the gym the next day, and I asked him, 'do you have a brother named Mark?' 'Yeah, I do.' 'Does he make video games?' 'Yeah, Toe Jam & Earl.' 'Wow, I just finished his game. I loved it.' I was interested in some summer work, so I said, 'can I get his number and contact him?' I made the call, and sure enough, they were working on the sequel."

It's one of those breaks into the industry that you can only dream of.

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"They needed some help doing level design," he continued. "I drove up to Novato [California] and interviewed with him and his partner, Greg Johnson. I got super lucky. They gave me the gig. That was my first break. I worked all summer, commuting from Palo Alto to Novato. I got my first game published that summer. That was the foot in the door."

Wells didn't stop there. After his time at Johnson Voorsanger Productions, he found himself receiving help from folks at Toys For Bob – today known best for the Skylanders games – in getting a job at Crystal Dynamics. Wells worked on the PlayStation game Gex while finishing his college degree.

Christophe Balestra's journey to Naughty Dog is a bit more straight-forward. He co-founded and owned a small studio called Rayland Interactive, located in Europe. "I started working on the Atari ST, and then the Amiga, and then the PC," he recounted. "That's where I started learning, working on projects and just learning programming. After that, it was an obvious thing to do, to start working on video games."

His intelligence and drive allowed him to learn a number of different disciplines integral to the creation of games. "It was good experience. I was pretty much the only programmer. Physics, tools, whatever. That's how I got into video games."

Christophe Balestra left France to make his dreams a reality.

Rubin and Gavin found Wells and Balestra in different ways, and at different times. "I had only barely heard of [Naughty Dog]," Wells admits, talking about how he first came across their name when working on 3DO titles, and hearing about Naughty Dog's lone 3DO game, Way of the Warrior.

"Then we were working on the sequel to Gex," he continued. "It was a 3D platformer.

Right around that same time, we started seeing rumors about this game coming out called Crash Bandicoot. I saw some screenshots and looking at the graphics, we were like, 'Oh my god, how are they doing this? This can't be the same hardware we're working on. This is amazing.' Then, when it came out, it blew up, of course."

"Right around that time, [I] started talking to Jason and Andy about maybe coming and joining their team. It was an explosive start, going from Way of the Warrior to Crash Bandicoot. They surprised everybody with their technical chops. It was an intriguing proposal to come work for them." It took a couple of years for Wells – along with his friend, Danny Chan – to agree to go work for Naughty Dog in 1998.

Balestra's route to Naughty Dog was markedly different. "I had worked for a British company that had some offices in France, making games. The experience didn't go so well," he admitted. "They asked me to go to London and start my own team there. I didn't like London. I didn't want to move there. At the same time, I was playing Jak & Daxter and saying, 'holy shit, this is amazing, all the stuff they could draw on the screen.' I really enjoyed the game."

Oh my god, how are they doing this? This can't be the same hardware we're working on. This is amazing.

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"I started going on the Naughty Dog website. At the same time, they had a bunch of videos explaining how they were doing things. I was like, 'I want to work with those guys.' I felt a connection. I had no idea where they were. The United States? I didn't know if it was California or Santa Monica. It could have been anywhere. It didn't matter to me. I didn't want to move to London. If I had to move somewhere in the world, I wanted it to be where those guys were. I sent in my resume and they called me back a day or two later. That's how it started." Balestra began at Naughty Dog in 2002.

It didn't take long for Gavin and Rubin to figure out that they had two dynamic, valuable, and talented people on their hands, and even though they started at Naughty Dog several years apart, the seed was set when they were both there together. These were the guys that were going to take Naughty Dog over and allow the founders to finally bow out after two decades at the helm of the company, going all the way back to the days of JAM Software: Jason and Andy's Magic.

"Within a year [of starting], Evan was already a senior person on any project we were working on," Rubin said. "Basically second to me, in terms of directing stuff, rather than programming. But immediately, the talent was obviously there."

Gavin elaborated. "I remember specifically, Evan had come in and he had asked how to do something on Crash 3. I'd given him five minutes of instructions in this difficult script file that I never expected him to absorb, because I had given the same instructions at length to a zillion people and no one ever absorbed it. Evan comes back an hour later and he's done this huge amount of stuff in it already. He was just asking some refining questions. I'm like, 'whoa.' I went over to Jason and said, 'you know, I think Evan might be the find here. He got this.'"

"There were a couple of programmers that I had shown this [other file to]," Gavin said. "I had shown that to a couple of the programmers at great length and half of them hadn't picked it up. In five minutes or whatever, Evan picked it up, because Evan is really smart. He's a very big picture thinker."

Gavin later noted that "Evan was what we used to call a Crack Filler... He would do any part of the game. He might not do some art or whatever, but he would help make anything better. He would go to the people who did that part and make sure they got it done and smooth it over and make a decision on it. That, in some ways, is one of the most valuable skills on a lot of projects."

Sam Thompson had more to say on Wells' talents. "Evan Wells is probably the single most talented guy I've met. His ability to speak to multiple disciplines. He's the consummate co-president, executive producer. I couldn't imagine having anyone different. He can speak to any discipline on the floor, knowledgably, in a way that they can understand. He can speak to any code aspect, any design aspect. Complete understanding of every system, subsystem. It's just incredible."

Similar stories were told about Balestra. "Christophe came to us as a very junior programmer," Rubin said. "He came from France. One of the lower salaries at the time. He was a very junior person. He came along with a more senior programmer, also coincidentally from France – we hired them as a package – who had a higher salary. Two years later, Christophe was second in charge under Andy. Again, the instant ability to do the work."

Evan Wells is probably the single most talented guy I've met.

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"Within a week, it was obvious" how talented he was, Gavin interjected.

"He could both do the work he needed to do and manage, which are two different

tasks," Rubin continued. "This is a talent-based company. There's no seniority here.

You either do your work and you get the position or you don't do your work and you're out. Nobody would say, 'he's more junior than me, he's younger than me.'"

"The other programmer that came with Christophe... I remember, the same day Andy promoted Christophe, when I was in a meeting where Andy told him he was going to be number two in the company, and his salary more than doubled. It was night and day, because he was now a senior person at one of the best game companies in the country. That same day, we had to fire the other programmer for being utterly inept. Christophe said, 'this is what's great about America. I come here as a junior programmer and I'm a senior programmer.' The other guy says, 'this is what sucks about America. In France, I could never be fired!" At this point, both Gavin and Rubin erupted with laughter.

"I remember a few days in," Gavin said, "[Christophe] came and asked me some question. I started to explain some whole system. He's like, 'you don't have to explain that. I'll figure it out. If I have a question, I'll come back.' He comes back an hour later and asks one little question. I started explaining. He's like, 'that's slowing me down.'"

"He goes back [to his desk] and he has the whole thing done," Gavin said with a laugh. "Or he'd come in and say, 'I built a whole new system to do this because the other one sucked.' Lots of systems suck, you know? You just live with them all the time, because you have limited bandwidth. He just whipped [up] these whole new, big things. I hear he still does that kind of stuff. Some process will annoy him and he'll pop in on a Saturday and just rewrite the whole thing."

With Wells' and Balestra's talent readily identified, Gavin and Rubin began to plan their exit with these two men in mind to take over for them. But it was a transparent, slow process, one that moved at an almost glacial speed so as to not upset the delicate balance that allowed Naughty Dog to work as well as it did, and thrive as much as it had up to that point.

Wells and Balestra because Naughty Dog's new leaders when Gavin and Rubin left. (Courtesy: BAFTA)

Indeed, Jak X – the post-Jak 3 PlayStation 2 cart racer – was designed specifically to give Naughty Dog some breathing room, not only in between PlayStation 2 and PlayStation 3, but to give space between the ultimate exit of Rubin and Gavin and the timely ascent of Wells and Balestra. Jak 3 in particular was finished in under a year, from start to finish, and Jak X was also a quick project. But the future wouldn't be so easy. Things had to be handled delicately.

"I was burnt out," Rubin admitted. "I was looking at this and I was like, 'I don't see this getting better.' I see more and more employees. I see me managing more and more. And also, this incredibly talented Evan right below me who's going to do one of two things. There were a couple of shaky times where some people were talking about forming their own companies or whatever. He's either gonna leave, or he's gonna run this company."

Rubin contemplated his own future once he decided it was time to leave Naughty

Dog. "Where's my role going to be?" he rhetorically asked. "I briefly talked to Sony about moving up into managing all of the teams in America. That didn't sound cool, because then I wouldn't be able to impact any title, but I'd be responsible for all of them. That sounded like a nightmare."

Rubin informed Sony two full years before he actually left Naughty Dog in 2004, and he even moved Evan into his office a year before he left. "The last year, he was in my office. I worked in the second-biggest office for our side of the company. He worked in the biggest office so everybody respected that he was going to be around."

"I just wanted to take a year off," Rubin later said. "But you can't take a year off in this business. No director can. I had all these directors I'd become friends with in Hollywood. They'd be like, 'I'm gonna spend six months with my kids. I'll just tell my agent six months and do a movie when I'm done.' You couldn't do that as a director in the game industry. Still can't."

I was burnt out. I was looking at this and I was like, 'I don't see this getting better.'

"

"And you had all this responsibility," Rubin continued. "It was just building and building and building. It had been, keep in mind, from Crash until the time I left, 10 years of no vacation and working my ass off, basically killing myself... I just said, two years before the day I left, 'Shu [Yoshida], I gotta take time off. I'm going to transition to Evan. We'll do everything right for the company to make sure Naughty Dog survives over these two years."

"It was very nicely staged," Gavin noted. "We had, in that last year in particular, Evan... Christophe... technically, they reported to us. But we didn't tell them anything to do. They just did their thing. Occasionally, we'd throw out some advice."

"I had a role in the company," Rubin said. "If you could come to me with a question, I would give you an answer and you were going to like it or not like it, but that was the

answer. That last year, when they came to me for the final answer, I would say, 'Evan makes the final answer.' That helped the transition be completely smooth. Everyone knew it was coming. Everyone knew to respect him. They had already worked with him. If there were questions, they came to me. We all worked it out. They were all ready."

The rank and file of Naughty Dog may have looked at Wells and Balestra as their new leaders, and were ready for the transition. What the company wasn't ready for, however, was the turbulent time ahead, one that saw Naughty Dog attempt to split into two teams, only to have one game scrapped and another game incubate for so long on all-new complicated hardware that it nearly broke the studio's morale.

Indeed, the next few years – as Naughty Dog jumped from PlayStation 2 to PlayStation 3 and PlayStation Portable – were the most turbulent and trying in the company's history, and it almost didn't live to tell the tale.

With Jak & Daxter's PlayStation 2 trilogy (and its cart racing epilogue) behind it, Naughty Dog looked forward to PlayStation 3. PS3's future was wildly uncertain, and the studio wanted to contribute something meaningful to its library. With the creation of Uncharted: Drake's Fortune, Uncharted 2: Among Thieves, and Uncharted 3: Drake's Deception, Naughty Dog succeeded at doing just that.

But its extremely popular franchise starring daring adventurer Nathan Drake wasn't easy to make. In fact, the rise of Drake coincided with the most difficult period in Naughty Dog's three decade-long history, a period so wrought with issues that Naughty Dog quickly found itself in serious trouble.

I. To Jak, or Not to Jak?

Naughty Dog released four games on PlayStation 2, and its Jak & Daxter series is among the console's most fondly-remember titles. But a big transition was afoot, and as the studio began investigating new technologies, Sony began to utilize Naughty Dog's technical prowess to achieve important goals for the greater first party family.

Have you played Crash Bandicoot?

YES	NO

We were a company of 60 or 70 people, and I think 25 people left in the span of that year. We were bleeding talent.

"

Making matters more complicated, Sony and Naughty Dog decided to cut the studio in two. The famous split that resulted in the concurrent development of Uncharted 3 and The Last of Us wasn't the first time Naughty Dog became a two project studio. It was just the first time the split actually worked well enough to broadcast it to the world.

"Those couple of years in transition [between PlayStation 2 and PlayStation 3], that was a very traumatic time for this company," Cinematics Animation Lead Josh Scherr candidly stated.

"Yeah," Narrative Design Lead Taylor Kurosaki agreed. "It was a lot of things all

"Team," Narrative Design Lead Taylor Kurosaki agreed. "It was a lot of things all coming to a head at the same time. It was moving from PS2 to PS3. It was trying to become a two-team studio. Going to two new platforms (PS3 and PSP), Jason [Rubin] and Andy [Gavin] really finally just stepping away."

"It was really traumatic," Scherr later said. "We were a company of 60 or 70 people, and I think 25 people left in the span of that year. We were bleeding talent."

"It was brutal," Kurosaki interjected. "The other thing was, all the PlayStation 2 engine was basically completely architected by Andy. It was GOAL and LISP and all these other arcane languages, half of which he had basically invented. How do you move all of that code to PlayStation 3? The answer is, you don't. We were starting from nothing."

PlayStation 3's imminent arrival was causing issues at Naughty Dog.

"It was bleak," Scherr said, to which Kurosaki quickly answered, "It could have been a total disaster."

But there was a method to the madness, or so it seemed. "We had to grow at a faster rate than we were used to," Naughty Dog co-president Christophe Balestra remembered. The studio, fiercely proud of its unique, proprietary technology, was suddenly transitioning to more generic tools. This didn't only mark a major change for everyone at Naughty Dog, but forced the scrapping of years' worth of work in order to step into a new unknown.

How do you move all of that code to PlayStation 3? The answer is, you don't. We were starting from nothing.

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"We wanted to become part of a bigger first party development community," Naughty Dog's other co-president, Evan Wells, said. "We had the ICE [Initiative For A Common Engine] team, and they were going to be sharing code [with other Sony studios]."

Lead Graphics and Engine Programmer Pal-Kristian Engstad, who's been with Naughty Dog since 1999, was originally affixed to the mysterious ICE project. "What happened was that Jason [Rubin] and, I think, Shuhei [Yoshida] figured that the Sony studios weren't talking with each other. We weren't working with each other. We didn't know what people were doing. So they came up with the idea of starting the ICE team."

Mark Cerny – today most famous for his contributions to PlayStation 4 but also deeply embedded in Naughty Dog's Crash Bandicoot and Jak & Daxter projects – was helping with ICE. But since he wasn't with Sony full-time, Engstad got pulled in as ICE's Lead Manager. "That was interesting," he said, "because I came from just making an engine for our games. I had no clue how to make an engine for all of the teams. And so we stalled that by saying, 'well, we're not going to make an engine for all of the teams, what we're going to do is just make components that everyone will need.'"

Mark Cerny was involved with ICE, but couldn't lead the project.

Agreeing to work on ICE allowed Naughty Dog to get very early, highly coveted access to PlayStation 3. "We were the first ones to really hack the PlayStation 3," Engstad said, giving Naughty Dog "years of experience on PlayStation 3" by the time Uncharted: Drake's Fortune launched. But ultimately, the inherent, unbreakable secrecy of the ICE project drove Engstad back to development. "I felt that making games was more fun than supporting everyone else."

Still, as far as Naughty Dog's leadership was concerned, ICE served its purpose, even if changing technology meant major problems for the studio's established workflow. "We just wanted to be more in sync with the rest of the development community,"

Wells said, "so that's why we switched to C++. Which meant we had to rewrite everything from scratch. If we wanted to print some debug text on-screen, that had to be rewritten. We also had the crazy idea that because the next generation was going to be photorealistic and the PS3 could render the most amazing stuff ever, that we needed to rewrite all of our tools, too. We literally threw everything out."

Long-time Naughty Dog programmer Travis McIntosh -- who started his career in the trenches at THQ making games "that were uniformly terrible" – echoed the tribulations that came from abandoning the studio's old tools all the while the roster of new employees was growing.

What are we doing? What are we making? All this stuff conspired to create some chaos...

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"Part of [the problem was] production. It's not even tech," he said. "It's like going from a garage-style studio where you know everybody in the whole studio and there's five or six guys you're working with, and then going to what Uncharted was, where we don't even make all the data and everything in-house. We'd never outsourced anything before."

"We had GOAL, which was a weird LISP-based language which we were in love with," he continued. "Then we had to switch to what everybody uses, C++, and it was basically brutal. We had to throw out everything, all of our tech, every single line of code we'd ever written, and start from scratch. I don't think we could do it now. It was crippling, in a way. We had to do it, but it was bad."

Sam Thompson, Naughty Dog's longtime Sony-side producer, insisted that while the technological troubles the studio ran into during the interregnum between Jak & Daxter and Uncharted were many, it ultimately worked out for the best, largely because the programming and coding talent at Naughty Dog was so incredible.

"It's very difficult to create technology," he said. "It's a huge sunken cost. You dump a

lot of money into it, you spend a lot of time, and then you have to figure out how to monetize it to get your investment back. EA experimented with a lot of this unified code branching where they would build certain aspects of the save system or the menus and multiple games would use that. I think a lot of publishers are still trying to figure out how to maximize profits when you're dealing with technology creation."

PS3 wasn't Naughty Dog's only concern. This was, too.

"But at the time," he continued, "Naughty Dog was writing the most efficient code in the business… These guys were finding ways of optimizing code and memory allocations that were unheard of. It's unbelievable, the performance they were able to get… As a publisher, when you see a team that's that adept and understands the hardware that well, the value proposition is pretty high."

Still, the process of creating new technology took a serious toll on the company. Audio Director Bruce Swanson explained more. "That transition to the PS3, and the

personnel changes, and the other things that were going down at the time, yeah, it was fairly tumultuous. There were some false starts. There were a lot of questions about the direction of the company and the direction of the product. In my time here, which is quite a while, that was probably the shakiest bit."

Swanson then brought it in a more positive direction. "But in true Naughty Dog style, it also always inspires somebody to take the bull by the horns. That was pretty much what happened... I have to say, since then, just in hindsight, Naughty Dog has just been more and more steady. Certainly it makes sense that there's going to be a little bit of some growing pains between the founders of the company leaving..."

# ...the reason the PSP team was killed was not because of the PSP project. It was because of Uncharted.

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"But you have this... changing of the guard, a change in technology," he concluded. "What are we doing? What are we making? All this stuff conspired to create some chaos, from my perspective. Other people might say it was different. But we didn't waste a whole lot of time in that space. It seemed like, pretty quickly, the deck chairs were rearranged and things continued to float."

Unfortunately, en route to a more positive space – one where Nathan Drake and his fictional friends reside – was Naughty Dog's most notorious canceled project. It came in the form of an abandoned PSP game, one that was set to continue the Jak & Daxter franchise in portable form.

"The PSP game was interesting," Thompson recalls. "[Naughty Dog] had this other idea for a Jak game. At the time, they were really excited about PSP. The real issue with PSP, and in general with the studio, is that Naughty Dog is a group of industry professionals that craves cutting-edge technology, bleeding-edge technology. At the time, the PSP, even though it was really popular and successful, it just wasn't enough to keep the people here satisfied and focused. They needed a bigger challenge."

With that said, the handheld Jak game the studio was developing for a while looked, by all accounts, very promising. "They'd come up with this really cool tech demo," Thompson continued, "[and] we had a couple of levels working on the PSP. The game was going to be awesome. We were super excited about it, because it was basically taking concepts from Jak X, but actually fulfilling what we wanted to do, with parts that were meaningful."
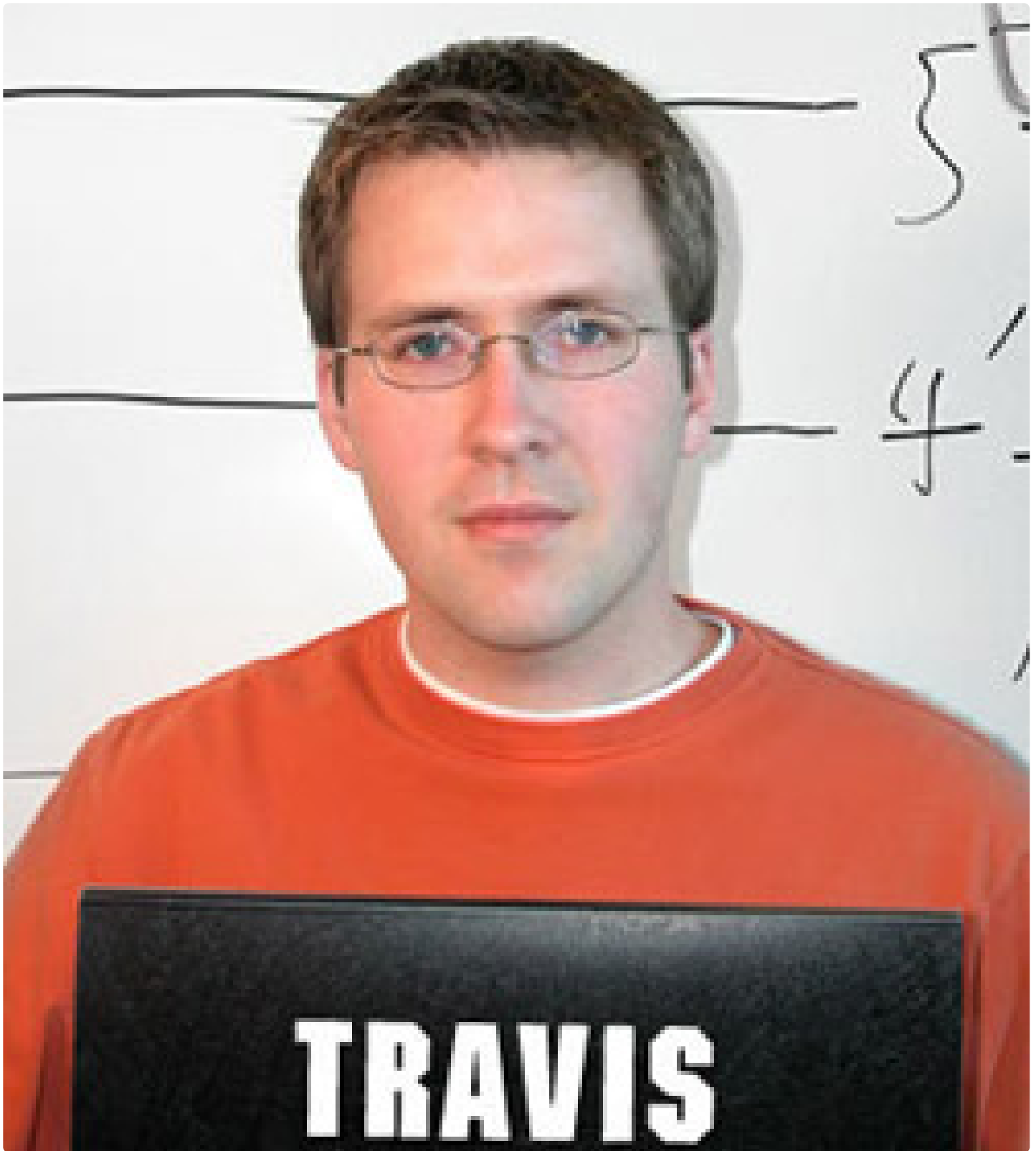
Naughty Dog's Travis McIntosh. (Courtesy: Moby Games)

"You could create your own airships and cobble together all these things with these different stat bonuses and actually have meaningful engagements in the air,"

Thompson explained. "You could jump from plane to plane. It was going to be really cool. But we couldn't get anybody here to work on it, so we put it on the cooler for a while."

Creative Director Neil Druckmann, who today is famous for his work on The Last of Us, toiled away on the aborted PSP project for quite some time. After interning at Naughty Dog during the development of Jak 3 and working hard to prove himself with menial tasks during Jak X's brief dev cycle, Druckmann finally got to jump into design with Jak & Daxter on PSP.

"When that project was starting up, I went and asked Evan Wells, I told him I wanted to switch over to design. He's like, 'no, we hired you as a programmer.'" To prove himself, Druckmann would spend his off hours doing level design and bouncing his ideas off of Wells, pestering him for his advice as his work got undeniably stronger and stronger.

I had somebody coming to my office to resign almost weekly, if not daily. Lots of the e-mails going out saying, 'this is farewell.'

"

"Then we started to move to [Adobe] Illustrator," Druckmann said. "[Wells] said, 'okay, this looks good on paper. Let's see how you can do it in Illustrator.' So I learned Illustrator, did all that, kept bugging him over and over again until he just got tired of me and said, 'okay, fine.' When we started Jak PSP, I became a designer on that. Than we worked on that for a while."

But this PSP title – which would ultimately be fleshed-out and finished at High Impact Games under the moniker Jak & Daxter: The Lost Frontier – had to be abandoned, not because it was bad, but because Naughty Dog simply wasn't capable of developing two games at the same time at this point, especially when splitting focus

between two entirely different platforms.

"First off, the PSP team was awesome," McIntosh said. "It was so much fun. That was the most fun I ever had making games. We got that game up and running in like three months, straight port, and it was a full vertical slice. That was a lot of fun... [But] the reason the PSP team was killed was not because of the PSP project. It was because of Uncharted. It was because we needed those people on Uncharted. It just wasn't working."

Josh Scherr went more in-depth about the reasons for Jak PSP's cancellation. "What happened with the PSP game is that we realized Uncharted would never happen if we still had people working on the PSP game. I'm sure there were some other decisions too, like questioning whether the effort of making the PSP game would be financially worth it to the company and all that sort of thing. I wasn't privy to those decisions."

"But it just became very evident that Uncharted needed more people and the fastest way to get more people was to shelve the PSP game and bring all those people back to Uncharted. That was the primary motivation behind that."

"We had done a lot of work, a lot of cinematics on the PSP game," Kurosaki said. "I was really proud of it... That whole opening cinematic [in the final game] was basically shot-for-shot what we did."

JAK AND DAXTER
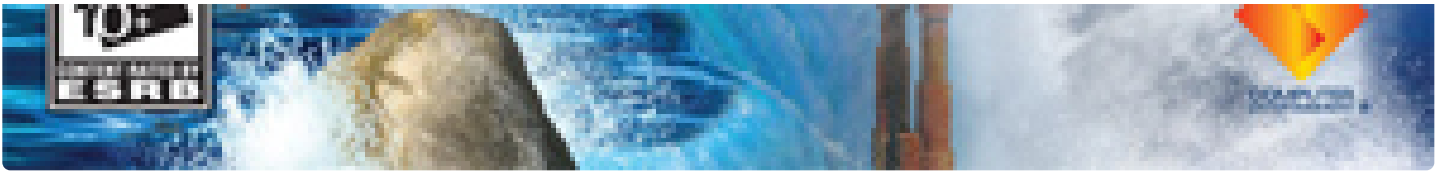
THE LOST FRONTIER

Another developer ended up putting out Jak PSP (which also came to PlayStation 2).

At the end of the day, the rampant uncertainty pervading the studio, the low morale in every corner of the building from chipping away slowly at two new, difficult projects, and the need for Uncharted to be the major focus of everyone at Naughty Dog forced management to put Jak away for good. "We thought bad things were going to happen" during this time, McIntosh admitted. "A lot of people were worried about the studio surviving."

"We have passionate people here that love doing their jobs," Wells said. "They want to be able to create. They want to make awesome art. They want to design cool levels. It was a period of probably 12 months where the productivity was so low, and everything [for both projects] was still conceptual. There was nothing concrete where you could say, 'this is what the game's going to be, this is how the game's going to look.' People started to get restless and concerned with all the changes that were going on. They were losing faith. They were saying, 'okay, I'm out.'"

"I had somebody coming to my office to resign almost weekly, if not daily. Lots of the e-mails going out saying, 'this is farewell.' It was tough to watch it happen. This could be it, you know? They could hand us the keys and we could let it all just die."

"Fortunately," Wells continued, "we made the decision to cancel the PSP project, because we were like, 'all right, we just have too much. Our focus is spread too thin. We need to lay the focus on the most important thing, which is going to be the PS3. We have to get this first game right. We have to get our technology right.' So we shelved that project."

I'm not happy with that being Jak's swan song. I think we could have done a lot better.

"It takes a long time to build a team, to get people to work together on the same vision," Balestra noted. "When all those people are new, it's almost impossible to make it work. It was not fun. We were just taking over and saying, 'fuck, we're going to be responsible for this whole company going down.' But we made the decision to kill the PSP project."

"Also, it's that shift I was talking about," he continued. "When you were on Jak 3 or Jak X, you knew everything. You knew the engine. You knew how to get things done. Suddenly, that group of people goes from there to just, you stop. You have to start moving so slowly. It's a very difficult thing to do."

But as for the Jak & Daxter project that Naughty Dog never got to see through, there's some regret. "At the time, it looked like [High Impact Games was] going to be able to do a pretty good job with it," Thompson said. "I don't want to say anything disparaging. I like the guys at High Impact. [But] if we had had to do it all over again, we would have done some things differently in the execution of The Lost Frontier. I'm not happy with that being Jak's swan song. I think we could have done a lot better."

But Jak & Daxter's end came at just the right moment, a moment where a brand new, all-important franchise would be born.

II. The Tale of Project Big

By the time the visionary behind Uncharted -- Amy Hennig -- came to Naughty Dog, she already had well over a decade's worth of experience in the industry. "1989 was when I started. It was completely one of those fluky situations that you just stumble into," she admitted.

Hennig went to school at Berkeley, where she earned her undergraduate degree in English literature. She then went to San Francisco State to study film theory and production. "I liked the idea of making these films. I loved the idea of making Hollywood films," she said. "But it was so clear, even from that little bit of film school I had, that [that] industry was so entrenched. It was hard for women, too. I could tell

just as a student, that it was going to be an uphill climb, especially for the job I wanted."

I liked the idea of making these films. I loved the idea of making Hollywood films.

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So Hennig started to "scramble for work to pay for school" and "took every contracting job [she] could, doing everything from word processing to page layout to illustration for tech manuals." Her willingness to do anything to pay off her student debt led her to a project on the Atari 7800, her very first gig in the gaming industry. It was called ElectroCop, and unfortunately, it never saw the light of day. Her work is "all lost to history," but it laid an important foundation for her.

Have you played Crash Bandicoot?

YES   NO

From then on out, Hennig worked full-time on games, on titles ranging from Michael Jordan: Chaos in the Windy City to Desert Strike, both for Electronic Arts. By the time she ventured to Crystal Dynamics, she began toiling away on the Legacy of Kain games that would cement her name as one of the up-and-comers of the gaming industry. But she wanted more.

"I sort of felt like [Naughty Dog and I] were kindred spirits at the time. I was kind of sad, because some of my favorite ex-colleagues had gone from Crystal to Naughty Dog. I almost felt like, 'well, I want to go too!' You miss these people... There are certain people that you respect and you want to keep leapfrogging with them if you can."

She later explained that, "At the time, Evan confidentially told me that Jason and Andy were transitioning out. They were going to be handing the reins over to Evan and Stephen [White], at the time. This was before Christophe stepped up into that position. Obviously, that made it very attractive, too. Here were these two guys who I respected and liked immensely who were going to be running the company. At the same time, I was going to get to be around while Jason and Andy were still there. It was the best of both worlds, in a way."

Amy Hennig, the creator of Uncharted.

Ultimately, Hennig made the jump. "Once my friends had gone there, my colleagues had gone there, it felt like there was an obvious pull. Creatively and technically and ambition-wise, there was this kindred spirit feeling. I always looked at what they were doing with both Crash and Jak & Daxter as sort of, 'aha, that's what we need to be doing!' Taking cues from them. We would study their games and how they were doing the camera. We stole liberally, as you do in this industry. It just felt like a really natural transition."

Hennig wasn't concerned about losing any freedom by going to a first party studio that only made games for very specific hardware. Quite the opposite, in fact. "The thing is, Naughty Dog has never felt like a first party in a pejorative sense that somebody might apply. And I don't think that applies in Sony's case, anyway. I think the first party studios are very well taken care of. But because it was a wholly-owned subsidiary that maintained its own culture and identity, that wasn't really an issue…"

I liked that garage shop mentality, and Naughty Dog still had it.

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"I had been at Electronic Arts and deliberately left because it was becoming a big company. Then I went to Crystal Dynamics and it started to grow. I liked that garage shop mentality, and Naughty Dog still had it. It wasn't like, 'oh, you're joining a big corporation.' It doesn't feel like that now, even with 200 people here."

Originally brought on to help create Jak 3, the ultimate goal for Hennig – both for herself and for Naughty Dog – was to create a new IP for the company to jump into the PlayStation 3 generation with. And even though she is the Uncharted series' writer and creative director, she humbly refuses to take credit for its success. "Well, believe me, it's a collective effort," she said. "I would never call them my games."

Still, Hennig spearheaded the creation of Uncharted through seemingly endless iteration. At first, all she knew was what she wanted the game to be like. "Obviously, we went through a long birthing process as a group to figure out what we wanted to do," she said. "We went through a whole bunch of ideas. We were very keen to separate ourselves from the pack. You could kind of see what everybody else was starting to work on. It was that era – not that we've completely escaped it – but that era of everything being very monochromatic."

Before creating Uncharted, Hennig created Legacy of Kain.

There were "A lot of first-person games. A lot of post-apocalypses – not to denigrate that, because we just made one – but a lot of the grim, gritty, gray, drab shooters. A lot of games taking themselves very seriously. We just thought that we didn't want to be in that group, or even competing on that level. It didn't interest us. So we wanted something that felt like it was continuing the spirit of what we'd done as a studio, as far as color and charm and humor, but was taking advantage of the realism that we

could accomplish on the hardware."

"Instead of making games that were cartoony – that's often used derogatorily, and I don't mean that, it's a choice – but we wanted to make believable, stylized characters, human characters, and start moving into telling more believable character stories, rather than the slightly more cartoony style that Naughty Dog had done before. We always felt like the pulp adventure genre was so underserved, and such an obvious thing. You had Tomb Raider out there, but it had been sort of floundering for a while. It had been just put into Crystal Dynamics' hands to figure out if they could revive it. But there really weren't any other good examples."

"It felt like it was a big enough sandbox that ceding that whole sandbox to just Tomb Raider was a shame. When you had so many other games that were so 'me-too,' and there were all these wonderful genre conventions that people weren't taking advantage of, it felt like a natural thing to do. It took us a while to get to it, though. We worked through our own post-apocalyptic ideas and sci-fi games and grittier, darker games, and then came full circle around to it. 'What are we doing?'"

It felt like it was a big enough sandbox that ceding that whole sandbox to just Tomb Raider was a shame.

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Some of the ideas for what would become Uncharted – which was known internally as Project Big – varied greatly from the Uncharted we know today. "We actually had one [idea] that was going to take place in an underwater complex," Hennig admitted. "We're really glad we didn't do that one, because that would have been right at the same time as BioShock, and they did it much better than we would have. Theirs is just so sublime. We were going for something much more, not horror-based, but it was more of a sense of entrapment, the claustrophobia. We were going to play with a lot of water mechanics and that kind of stuff."

"We played with that idea for a while, and it just felt so confining and not us, you

know? To do this game that was so confined when what we had been doing were these beautiful exteriors, lush, open types of worlds. We had an early idea – before Uncharted became Uncharted – that was almost a hybrid idea of The Last of Us and Uncharted. In hindsight, we were talking about being a kind of Nathan Drake figure, but in the future, and the relics he was looking for were the relics of our civilization, in this overgrown wilderness of the ruins of our world."

"It was post-apocalyptic," she continued, "but not scary, in the sense that it was kind of a beautiful post-apocalyptic world, with its own dangers and all, but the beauty of nature reclaiming our architecture and our relics. I still think that's a cool idea, but we went another way with that."

Uncharted's protagonist was created in the spirit of pulp adventure.

A final idea for what would become Uncharted "had more to do with tech," according to Hennig. "It was just a little bit more centered around technology and less about

some of the romance and the adventure. We decided to ultimately strip a lot of that away and get down to the stuff that felt much more romantic, in the old sense of the word, and more tangible, more grounded, a more earthy version of that stuff. [But] it felt like so many people were already playing in that realm."

Evan Wells also discussed this gestation process. "[What we were going to do next] was a big question. What was the buzzword they were throwing out?" he turned and asked Christophe Balestra. "It had to be relevant? There was something. Culturally relevant, I think, was the word. It had to somehow be either realistic or have something that tapped into the gamer's everyday life. So we had a bunch of ideas."

In addition to Hennig's ideas, "We had ideas of a bio-terrorist that would somehow release something that would make the forest take over the entire world," Wells said. "Actually, there's some of The Last of Us there. For a while it was sci-fi..."

[Uncharted's] main dude, I remember, he looked like Marty McFly from Back to the Future. He had this orange vest when I first saw him running around.

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"There was a concept art folder," Neil Druckmann added, "and I would keep going in there and looking at stuff. Early on, it was like this open world, Victorian era. It had a mixture of steampunk and flying vehicles. It was kind of a mishmash of a bunch of ideas. Then the main dude, I remember, he looked like Marty McFly from Back to the Future. He had this orange vest when I first saw him running around."

"But when I came on board the project, it was already in that pulp action-adventure vein, even though a lot of the story was different. At the very beginning, Navarro was an Interpol agent trying to capture Sully and Drake. The characters were there, but they had very different roles, and the arc was very different."

"There were a lot of things about Uncharted that were up in the air," Sam Thompson

explained. "There was the first big concern, which was how do we create this

photorealistic world and age-up the gameplay? At this point, a Teen Jak game versus a Teen Uncharted game were very different beasts..."

"There were problems with the story. There were problems with everything about it, right?" Thompson rhetorically asked. "[Uncharted] was supposed to be really heavily focused on underwater activity. At one point, there was even discussion of having these water manipulation weapons and things that you could do in the water. I think at one point it was going to be some kind of prison escapee game or something like that. There were all these ideas swirling about."

Uncharted was originally an underwater game, just like BioShock.

"I do remember something possibly about an underwater prison... [there were] water caustics and this kind of thing and that kind of thing," Bruce Swanson added. "There were demos of that stuff. But as far as I could tell, there wasn't necessarily a game."

In the end, Naughty Dog bought into Hennig's grand vision for Uncharted, as a fun, relatable pulp adventure. "[Uncharted] was inspired by a lot of stuff," she admits. "The movies are an obvious inspiration, the '80s, looking at Raiders [of the Lost Ark] and the Indiana Jones movies. We all love that stuff. But I'm a huge nut for stuff that goes back to the '20s, '30s, and '40s. It's an interesting era to draw from because a lot of people who are fans of games right now really don't know that stuff."

"A lot of people pull from the '80s, and you can see a lot of the '80s vibe in the work that people do, because we were all children of the '80s. But I've always loved things like Buck Rogers and the old serials and old pulp novels like Doc Savage, old adventure movies we looked at, like Gunga Din, and the serials. I could see, actually, where Lucas and Spielberg got all their inspiration from, because I started seeing all the resonance in the Indiana Jones movies. Comics like Tintin, the Uncle Scrooge adventures. All that stuff informed what we were doing."

I could see, actually, where Lucas and Spielberg got all their inspiration from, because I started seeing all the resonance in the Indiana Jones movies.

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"Once we really settled on doing this... I tend to be really analytical, too analytical, sometimes," she interrupted herself. "But I watched as many of these movies as I could and I just took notes, and read all the books and the comics and stuff that I could, and I broke down components of the genre into a parts list, essentially."

"You start seeing all of the parallels between these things, and how they were all inspiring each other, and how some of the ideas evolved from early sources, going back to the 19th century and into today. I just wrote down this list of tropes. I don't use that word, again, derogatorily. I think tropes are awesome. To me, they're just archetypes. There's a reason we keep going back to them. I don't think of them as

cliche."

Hennig went on. "But I set to figuring out the gameplay version of all those things. How do we do that? 'How do we honor that sort of narrative tradition and cinematic tradition, but put the player in control?' That was our concept, our opening statement. It was going to be an homage to pulp adventure cinema, but with the player in control as the hero. Obviously, that doesn't seem very groundbreaking now, because a lot of people are doing that now, but the idea, at the time, of doing a character-centric story with the set pieces and all that stuff, and really trying to make it feel like you were in a movie playing it, was actually somewhat radical, strangely enough. It's even hard for me to wrap my head around it, but that seemed like such a fresh idea to us at the time."

"So yeah, we created our parts list, we just started building everything. We're working off the same concept docs now [on Uncharted for PlayStation 4], even, because there's so much that we haven't been able to get to ourselves. We've been able to do pale versions or pale imitations of some of these set pieces that you might find in a film or a movie serial or something like that, but with every iteration we can always keep blowing these things out more and more."

"We wrote down what our touchstones were, as far as wanting to make sure it was lighthearted, fun, and charming. It was about the characters. It didn't take itself too seriously. And we could have supernatural elements, but we would never jump the shark too hard if we could help it. It should all be about exploration and mystery and discovery and scratching the itch that everybody has. Everybody wants to feel like there's still something to explore and discover in the world, [and] we haven't mapped every corner of it. I think that's why [Uncharted] has such broad appeal."

The relationship Naughty Dog had fostered with Sony allowed the studio to take calculated risks with Project Big. Sony wasn't shooting down ideas. Indeed, Sony wasn't approving or writing-off any ideas at all. This very fact helped Hennig and her crew develop Uncharted into what it would become: one of Sony's best-selling and most important exclusive franchises.

"Sony's an incredible partner, and I'm not just saying that because they pay my paycheck," Hennig noted candidly. "It's just true. I think people can see that externally. The reason Sony's studios are able to accomplish so much is because they're really hands-off. That means you're given enough rope to hang yourself, but you're also not so constrained that you're going to make decisions by committee, or out of fear. We can reach for the stars a little bit."

She later added that "I think [Sony] just wanted us to do what floated our boats. Whatever got us excited got them excited. We did some early animatics and concept video presentations that got everybody on the same page. I think the hardest thing was always more from marketing, trying to figure out how they could market this. I think there are still people that struggle with that a little bit, because the concept of saying 'we don't have an iconic character.'"

We're treating Nathan Drake as if he was an actor we had cast in a movie.

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"We're treating Nathan Drake as if he was an actor we had cast in a movie," she continued. "If we do our jobs right, he will become as real to people as an actor if he actually existed. His iconicness will come out of the fact that we're going to make him a star, essentially. But the idea of saying that your main character was going to be a guy in a t-shirt and jeans, and that's it, was pretty scary for Sony, because how do you turn that into an icon, a mascot?"

"For them, a character like [God of War's] Kratos is so much easier to wrap a [marketing] campaign around. 'What's the cover look like? What does the poster look like? How do you get the word out to people that this guy is an aspirational hero, that they're going to want to play this character?' It's interesting."

With Project Big's evolution into Uncharted – and with Sony's buy-in on the vision – Hennig and her team got to work on creating Nathan Drake, his friends, and their adventure. But formulating the idea for Uncharted would be the easy part. Actually executing on the idea proved to be far more difficult.

III. Creating A Fortune

Naughty Dog's cancellation of its PSP project – and the folding of that team back into the Project Big team – allowed the studio to focus wholly on creating a PlayStation 3 game. But PlayStation 3 continued to prove problematic for the studio. As a result, Drake's Fortune – the first Uncharted game – would be Naughty Dog's single longest-in-development title in its history.

"I think everyone overestimated how smoothly the transition to the PS3 and development on Uncharted was going to go," Taylor Kurosaki said. "It was a game that didn't really want to be made."

I think everyone overestimated how smoothly the transition to the PS3 and

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"A lot of it, too, is just, 'oh my God, the PlayStation 3 can do anything! Let's just go crazy!' Josh Scherr added. "And then, of course, we're like, 'oh shit, we can't.' You end up spending a lot of time scaling back."

Persistent personnel issues also proved problematic, as did the more realistic vision for Uncharted. "The period [of Uncharted: Drake's Fortune's development] was very turbulent, because not only was the console changing, but the IP was changing into a direction that a lot of people were uncomfortable with," Naughty Dog Texture Artist Tate Mosesian said. "Going more realistic. Getting away from the demographic that we were focused on for two franchises and several years."

Have you played Crash Bandicoot?

| YES | NO |

"There were a lot of people who started working at Naughty Dog because that was the game they wanted to make. They wanted to make Jak or Crash. So there was that faction of people who were disillusioned with the direction the studio was going in. There was a wave of people who left because of that..."

"If you've ever been involved in working on a new IP," he later said, "it's very difficult. If you try to do that while you're trying to build a game engine, it's virtually impossible. We were changing everything and trying to do everything all at once. I think it created some fear in people... Maybe I had my fears, but we were going to turn this into something cool. The people who stuck around felt the same way I did. We all had this drive to make [Uncharted] work."

Then there was the PlayStation 3 itself. PlayStation and PlayStation 2 very easily won their respective generations in terms of sales, but PlayStation 3 – eventually revealed to cost $600 per console – was about to change that trajectory. And that doesn't even begin to take into account that PlayStation 3 was – and still is – notoriously difficult to develop for.

"If you remember, when PS3 came out, it was sort of fashionable to talk shit about it," Naughty Dog Art Director Erick Pangilinan said. "It was a hard time for PS3. A lot of people couldn't program for it. They couldn't get any juice out of it."

"People were just figuring out how to tap into the full power of the PS2," Naughty Dog Senior Artist Reuben Shah added. "Now they launch the PS3 and it's like, all the engineers are scratching their heads. 'We gotta start over?'"

If you remember, when PS3 came out, it was sort of fashionable to talk shit about it.

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"This was our first time with the new engine," Pangilinan said. "Everything was new. When we were doing Uncharted, the mentality of how we should approach the game was different. Back then, we were trying to reinvent everything. The Naughty Dog culture back then was, 'we don't buy off the shelf.' Everything was made from scratch."

"We would make this complicated physics system, and then when we were almost done, it would suck and the guy would quit and no one would know how to fix it," he said. "And we were like, 'why don't we just buy [middleware software] Havok? It's the same thing we're trying to build here and it runs 10 times better.' That was a shift. From Crash 1 all the way to Jak, we made everything from scratch. We didn't use anything off the shelf. The idea was, Naughty Dog was so damn good we could do anything. One person is worth 50 other programmers."

"But obviously, we [weren't able to replicate that success on PS3]. We made so much stuff that we threw away. 'This is stupid. There's no need to reinvent the wheel. Let's just buy [the tools we need].'"

Pangilinan noted that PlayStation 4 is a direct reflection of Sony's understanding of how it botched a lot with PS3. On PS3, it took a long time to get anything done at all, "eight months before you could get something playable on the screen," he said.

Realizing Nathan Drake's first PS3 adventure was more difficult than anticipated.

"[Creating Uncharted] was difficult," Mosesian added. "Everything was unknown. Everything had to be vetted and tested and tried. There was a lot of trial and error. There were a lot of demos that solved problems, but got thrown away, and what got taken away from that built the next one. It was an iterative process... You have to expect that there are going to be setbacks and what might be perceived as some floundering. And there was."

"It was chaotic," he said. "At the same time, it was really exciting in terms of the new technology and everything. But at some point, you had to stop thinking about all that, because in 18 months you had to ship a game. Things get serious. Some people left

because in 18 months you had to ship a game. Things got serious. Some people left, and some people came in to fill those positions. By the grace of God, they were the right people at the right time."

"When we got moving down that track and seeing progress, that built the team morale," he later said. "It created this slow-moving train that became fast-moving, and then ultimately confidence started to build. I don't think it was until maybe six months before the end of the project, though, that people actually thought we had something good. Then, that last six months, we slowly all started realizing that this was pretty great. That just powered us through."

We were just as surprised [at PlayStation 3's price] as everyone else.

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It was at E3 2006 – that infamous E3 where Sony revealed PlayStation 3's high price point – that Uncharted: Drake's Fortune was shown-off. ("We were just as surprised [at the price] as everyone else," Wells said.) It was revealed without a name, much to the chagrin of the studio, who had already internally settled on the Uncharted moniker. But it was there, at that nerve-racking show, that the studio could finally set its eyes on the end goal, of getting this game into people's hands 18 months from that point. And they didn't even have final PS3 hardware yet.

"We had something the size of a refrigerator that was a PS3," Kurosaki said, "but we didn't have dev kits on the floor [of the studio]."

"We developed the entire E3 trailer for 2006 on PC," Scherr interjected. "Because, you know, it makes sense. If you're not going to be making a launch title in 2006, they need to allocate the dev kits to the people that are."

Once the studio had PS3 dev kits, moving everything over to them also proved difficult. "We couldn't get the engine in," Pangilinan said. "We couldn't get all our AI in. We had to do physics and all of these things. We were aiming this high, because supposedly the PS3 could do that. Obviously, we didn't make it."

"This was the only thing we could get for whatever reason [because of] personnel, technology, time, scope, everything. We were planning a game that much larger, and then we couldn't do it. We wouldn't make our ship date. We had to squash that. And so we had Uncharted."

"We spent half of Uncharted trying to figure out whether we could control [Nathan Drake] in the air, whether that's too cartoony or not, making the control feel right," Travis McIntosh explained. "...Once you're dealing with real people [in a game], everything's harder. In Jak, we could just make things up."

We were aiming this high, because supposedly the PS3 could do that. Obviously, we didn't make it.

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"And also," he later explained, "switching [coding languages], we had all sorts of legacy language stuff that we did that was really stupid on Uncharted 1. The

legacy language stuff that we did that was really stupid on Uncharted 1. The Uncharted 1 code is almost unreadable. It's so confusing. It took us multiple projects to clean it up."

That ability to no longer make things up on the fly did benefit Naughty Dog in one specific way, Josh Scherr pointed out. It allowed the studio to, for the first time, experience and utilize motion capture. "One thing that did work out very well was our cinematics production pipeline. We went about it in a very thoughtful and meticulous manner. We knew we had to step our game up."

"We knew that we were going to be animating realistic looking human characters, which brought up the idea of, we should probably use motion capture. You say 'motion capture' to any animator and you get the kind of angry villagers with torches and pitchforks at the door kind of response. Pretty much, I think, every animator at one point threatened to quit because they didn't want to work with motion capture."

But it all worked out. "If I'm animating, say, Daxter," he explained, "we have no real world reference for what a Daxter moves like, so we can do a fairly good job of squashing and stretching and doing all kinds of implausible things with him. But if you see a human moving incorrectly, it's weird. It takes you out of it. Motion capture gets you that huge percentage of the way toward a final result."

Creating a shooter was a totally different experience for Naughty Dog.

But there were issues, as Scherr explained at a different point. "A lot of systems for that game just didn't start coming online until very late. Even a month or two before the E3 [2007] that we actually showed it playable, we still had a reticle-based aiming system where you'd auto-target. You could flip between targets like Zelda. Then, at some point, somebody said 'this isn't cool, let's try something else.' Then we ended up with the cover-based stuff that we always see now."

After years of iteration and development, Naughty Dog finally released Uncharted: Drake's Fortune – its maiden PlayStation 3 project – right before Thanksgiving in 2007. And PlayStation 3's fledgling (but growing) fanbase took to it, even if it took a little time for word to get out.

In an era of sepia-toned space marine games, we decided to come out with a Technicolor adventure game, with a hard-

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"It was a little bit of a slow burn," Hennig noted. "Again, there wasn't a huge marketing blowout for it, because I think [Sony] had a lot of fear. And I'm not even saying that negatively toward Sony. I understand that they weren't sure if this was going to take hold. It seemed like it took root and was more word of mouth than it was a big advertising blowout that got everybody's attention."

"I don't remember what sales were at what points," she admitted, "[but] obviously, it's slowly risen to a very respectable level. But it was more like we had more opportunities with [Uncharted] 2 and 3 to keep building on that popular support."

Tate Mosesian had more to say. "In an era of sepia-toned space marine games, we decided to come out with a Technicolor adventure game, with a hard-boiled pulp hero. It wasn't undone, it just wasn't super popular at the time, as far as things were playing… But I think it was the absolute right thing to do."

"Maybe I would have thought, 'oh my god, all of our fans are going to leave us,'" due to Uncharted being so radically different from Crash and Jak, he later said, but "that never really crossed my mind. Looking back, Evan and Christophe, and even people at Sony, thank god they let us do it, because I love it. It's an awesome series. The Uncharted games, I'm so proud of those."

Players didn't only relate to Nathan Drake. They related to Elena, too.

But Sam Thompson wasn't as pleased with the end result. For him, there was more to be done. "This was one of the only times where I wanted to have more time on the project and we couldn't get it. We came down to where we really felt like another couple of months, the game would have made it four or five points higher [on Metacritic]. I don't know that for sure. It was a first run. We had to work a lot of stuff out."

"I don't think our aiming was quite there, [but the team] did just an incredible fucking job. It's not anything about that. But it was interesting. The first game is always just, 'holy shit, get it in the can.' There's a lot of things you look back on. We had never done an active combat system with firearms before, or thrown objects, grenades and things like that. It's a cover-based shooter. Everybody had played Kill.Switch and really liked the way that cover system worked... A lot of the initial cover system was built around that modeled after that."

...they just played the video game

equivalent of Indiana Jones. Which is exactly what we were after.

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"But it's funny," he said, "because you have all these things that you'd like to do and you'd like to spend more time on them. You know they can get better over time. But, it was strategically the best decision for us to go out when we did. Sometimes, you have to trust your publishing partners and understand that there's a greater good there. And so the game was released when it was released. Every other iteration of the game, we've had the time to do what we felt like we needed to do."

Thompson elaborated further. "[With] Uncharted 1, the team was kind of exploring all of these concepts that they'd never done before. It was a relatively young team, with a lot of new talent and a lot of people. The budget was way higher than we'd ever [had] before. If there was one thing that I wish we could have done, it's getting the screen tearing taken care of. That's still my biggest regret on Uncharted. That's the one thing that's just painfully obvious, that we could have corrected."

"It was really funny, because the lead programmer of [Sony-owned developer of Killzone] Guerrilla at the time, I forgot his name, Evan and Christophe had just ran into him at GDC. They just happened to be talking about V-Sync. He was like 'oh yeah, we fixed that a couple of weeks ago. Here's the code insert.' Evan called me and he's like, 'I can't fucking believe it. We could have just fixed it if we'd known.' We just didn't know."

2:46

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"If you go back and read a lot of our early reviews for Uncharted, [Sony's aforementioned fears of not being able to market Uncharted] were borne out," Hennig said. "There were a lot of reviewers who went into it saying, 'why am I supposed to care about this dude?' They admitted going into it with a negative impression. 'How is this going to be fun, to just play a regular-looking dude in regular clothes?' And then, at the end, they were turned around and realized – this is what they said – that they just played the video game equivalent of Indiana Jones. Which is exactly what we were after."

"But the entire project, the success of it, hung on that one thing. We knew it from the beginning, because that was in our original pitch. The only way to get this right is if we take the humanizing of the character seriously. I think you could see the arc, from that moment, through the Uncharted games and through The Last of Us. The more and more we can ground these characters in terms of tech that's required to portray them on-screen, and then in terms of our performance process with the actors and how we cast them and how we work with them, it all feeds into this one goal."

You might look at Elena as being the

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"If you didn't believe these were real people and like them, then the game wasn't going to sell. Or it wasn't going to be memorable. So we set out, with the original tech goals, to say [that] we couldn't make a guy in a space suit. We couldn't rely on rigid geometry. We had to figure out how we were going to make cloth look believable. We couldn't shave his head. How were we going to make hair? How is it that his movements weren't going to seem robotic, because this is just a man who's going to stumble and flinch and all of that..."

"As far as other characters go," she continued, "you just find them... We started off very deliberately playing in the sandbox. Everybody loves this stuff, this genre of movies. Can we play in that sandbox and wink knowingly back at the audience and say, 'Hey, we're in on the joke together. Isn't it fun?'"

"We're starting with tropes," she admits. "We're starting with clichés and some stereotypes. And then we wanted to make sure that we were peeling away some layers and deepening those characters and contemporizing them. That's really the evolution. You might look at Elena as being the plucky ingénue and Sully as the classic Hemingway-esque figure. That's kind of where they came from. We wanted to then show that those characters were more than that. We could have fun with the stereotypes and then deepen them."

Following Uncharted: Drake's Fortune, it was a no-brainer that the studio, which put so much into getting the game out the door, would utilize many of those tools to make a sequel.

IV. Crafting A Trilogy

"When we make these games, we always try to keep in mind that it would be great to see it be a franchise," Evan Wells explained. "You invest so much time in developing the IP that it would be unwise to just say, 'okay, this is going to be a one shot deal.'"

"Sometimes, that's still the best decision to make. We certainly don't plan out a trilogy or something with the whole arc in mind beforehand. But we knew that this genre, in particular, is a great one to serialize. So we wanted it to have its own self-contained story and have an ending, but we wanted to have this rich universe, too, with lots of interesting characters that Drake could continue to meet and interact with."

When we make these games, we always try to keep in mind that it would be great to see it be a franchise.

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"Also," Christophe Balestra jumped in, "I remember specifically, at the end of Uncharted 1, everyone in the office. We had barely finished the game and they were all talking about doing a sequel. They were talking about all the stuff they wanted to do. Of the three-year process [making Drake's Fortune], probably two years were spent just on trying to figure out the team and all the problems we had to crack and figuring out the hardware."

Have you played Crash Bandicoot?

| YES | NO |

"We were barely starting to get stuff working... We had nine months to make the game," he continued. "And so there were some frustrations, because we knew we could do a lot more. We knew that we were barely touching the power of the PS3... It was pretty obvious that we would do a sequel, because everyone was already

thinking about the stuff they could do to make the game better."

"It was interesting to see the energy after Uncharted 1," he admitted. "It was very different than other games, where when you finish the game you're just exhausted and you want to go on vacation. Here, people were ready to go. It was a pretty obvious choice."

Continuing the series made a lot of sense.

Amy Hennig remembered the days following Drake's Fortune's launch, when the team quickly focused on the sequel, a reflection of the game they really wanted the original to be, but simply didn't have the time, means, or technology to execute on the vision.

"We did a little bit of noodling around just before the holidays [in 2007]…" she said. "I think the thing is that there was so much we wanted to do and couldn't do. Like I said, we have that template document for what Uncharted is. We've only met the goals of half of it. There are so many things [left to do], such a rich sandbox. Things we could keep improving on, or things where it's like, 'we tried that set piece or that kind of gameplay, but it didn't quite come off.' You always want another at-bat."

...we have that template document for what Uncharted is. We've only met the goals of half of it.

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"So we already had so much that we were feeling like, 'okay, we didn't get to do that, but now we're going to get to really dig in and do it.' We were so excited, too... We launched right in, deciding that we wanted to tackle the tech of being able to have gameplay on a moving object. That was really motivated by the fact that one of the huge tropes you expect to see in action and adventure movies is that ability to have a fight on a moving train. We were like, 'God, that would be so awesome.'"

"The only way we could do it," she continued, "is by rewriting all of our systems, so that all of the characters, all the objects, all that stuff could operate on the moving terrain. The fact that we started everything [with] that idea... we had no story yet. We didn't know why there was a train, where it was going, where it was going to end up, why [Drake's] on it. Doesn't matter. We just knew that that was going to be just kickass and we would make sure it was a core part of our story."

"We could then sit down and really dig into [the story]. But something that substantial, you'd better decide [early]. If we're going to do this, we've gotta start now. We've always said that was the first level we started [in Uncharted 2] and the last one we finished, because the tech for it was monumentally difficult. You have to get your programmers and your artists started trying to figure it out from day one."

6:20

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"But I think we were just motivated by that kind of stuff, the challenges of what we wanted to do. Feeling out what we'd done well [in Drake's Fortune], what we wanted another shot at."

"The thing is," she continued, "what we'd gotten such good feedback about was the stuff that we were worried most about. Could we establish characters people had affection for and believed in as these real characters? It felt like that was pretty universally getting good feedback, even if there were other complaints about gameplay issues or technical issues. It felt like we were on the right track with that stuff, so why would you shift gears at that point? You just want to build on the foundation you've got."

Developing Uncharted 2: Among Thieves forced Naughty Dog to approach Nathan Drake and his story in a different way, even if so much of the groundwork already existed from the previous game. For starters, Among Thieves didn't just use motion capture; it actually used performance capture, meaning that everything -- including a character's voice -- was garnered in one go. While actors in Drake's Fortune did speak their lines in mo-cap, audio from those sessions didn't make it into the game.

Among Thieves was a different story.

Could we establish characters people had affection for and believed in as these real characters?

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"In Uncharted 2, we were getting sound and motion at the same time from the same actor," Josh Scherr recalled. "You just can't reproduce that [performance by having actors record their lines separately]. You can't fake that. Now, we would go in and change a bunch of stuff. We would re-cut all the audio because we're not doing facial capture. But the essence is still the same. It's a believable performance where [motion and audio] are connected."

These new tools and this new way of doing things at Naughty Dog continued to scare some of the old guard, but Scherr put it succinctly enough as to why it had to be that way. "It's like being a doctor in some way. New procedures come out and you have to keep up with that stuff. Otherwise, you become the quaint country house call guy."

"I think this is true for a lot of companies and a lot of engines," he later said, "but if we go back now and look at Uncharted 1, compared to the sequels or The Last of Us, it's just like, 'oh my god.' It's hard to believe it's on the same hardware. We didn't even have a skin shader on Uncharted 1. Everyone looks like these waxen dolls. There's no screen space ambient occlusion, so nothing looks like it's really grounded in the environment at all…"

Uncharted 2 introduced new characters like Chloe, while bringing back old favorites like Sully.

"But I think once we survived Uncharted 1 and realized that we finally had gotten a handle on this thing, we could really go to town and start doing some of the things that we had talked about, but just did not have the time to do."

"That desperate time, where people were falling by the wayside [during Drake's Fortune's development], people weren't able to keep up," Taylor Kurosaki jumped in. "Those who were there were just holding everyone around themselves up with them. I think that scrappiness is probably what led to Uncharted 2. We were just lean and strong and single-minded."

"Well, thank God nobody had any expectations for Uncharted 1," Tate Mosesian joked. "We actually delivered something that exceeded expectations, if there were any. It was weird. We're Naughty Dog. It's not like we're some quiet boutique company that nobody knows about. But that was really the feeling we had when we were working on Uncharted 1. No one knows about us. The word's not out. No one knows about this game. It just seemed all very under the radar and quiet."

It was weird. We're Naughty Dog. It's not like we're some quiet boutique company that nobody knows about.

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"Then, we got some recognition after it came out, and then there was Uncharted 2… Once we had Uncharted 1 under our belt, we had a template and we had a whole shitload of stuff that we couldn't do at the time, because all of the other constraints. A lot of what is in Uncharted 2 is just unrealized dreams from Uncharted 1…"

"…I believe Uncharted 2 is a lot better than Uncharted 1," he later noted. "Not only that it looks better. It looks way better. But the paradigm shift [that occurred]. Now that we had this engine, we had things like diagnostic tools. We could actually look at debugging some of our tech. We could look at optimizing and maximizing this amazing PS3 hardware that we really didn't even scratch the surface on. So we had time to do that."

"We had more focus into those areas. We were able to make it look a shit-ton better, which improves the game experience. We were able to create a story with beats that [made] people… excited to get to the next one. This thing comes to a crescendo, and, 'oh my god!' But I can't put my controller down because I want to move on to the next one. So [we] really found that formula there. [We] figured that out. So Uncharted 2 is amazing."

Still, Naughty Dog itself needed to improve internally to make a game of Uncharted 2's caliber. "We needed more," Erick Pangilinan said. "We needed to be more efficient. We needed better tools. Between Uncharted 1 and 2, we rewrote a lot of things. We rewrote our lighting. We rewrote our physics. We rewrote AI. We improved the engine. We basically did everything over again."

4:12

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"But having the world known in Uncharted 2," Reuben Shah interjected, "working on it and understanding the characters a little better, it did make things easier. You knew who Drake was at this point. Going into, 'okay, he's gonna be in this crazy train wreck sequence," you had a better understanding of what that was. If that was in [Uncharted] 1, you'd be like, 'uh, what do we do? What type of train cars? What type of this or that?' That defined things for us, to make decisions more clear in Uncharted 2."

Perhaps no one understood the pressure of making Uncharted 2 more than a newcomer to the team, Justin Richmond. Richmond joined Naughty Dog during Uncharted 2's development – and went on to be a major part of the team that made Uncharted 3 – but when he came to Naughty Dog, he did so with limited experience in the industry.

Richmond is a product of Boston University's film program, as well as the Vancouver Film School. His postgraduate degree is in 3D animation, making him a great fit for the world of gaming. Following graduation, he went to Backbone to work on the early PSP game Death Jr. before moving to another company, Blue Omega. Before long, he

was at Naughty Dog, working on the much-anticipated sequel to Drake's Fortune.

In Uncharted 2, we tried to create the illusion that it was a big action movie you were playing.

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"There was a lot of pressure," Richmond admitted. "We were trying to do a lot of stuff. We had started to crack the nut of how motion capture could be integrated with audio... So it was that, combined with, 'how are we going to make an action movie that you can play?' That was the directive that was handed down by [Naughty Dog's leadership]. Making sure we stayed true to that."

"It's funny," he continued. "The world has changed a lot since Uncharted 2, and I think some of the stuff we got away with in both 2 and 3, the world has changed so that we wouldn't be able to do that again, or at least in the same exact way. But when we did it [at] that time, it was ground breaking."

"In Uncharted 2, we tried to create the illusion that it was a big action movie you were playing," Richmond explained. "We didn't want every fall to kill you. A lot of the things we do are to make sure you don't have to replay a segment too many times, particularly if it's a narrative-based segment. We don't want you to die 14 times trying to save Elena. We want you to save Elena the first time, because that feels awesome. Saving her the third time is... less interesting."

Justin Richmond joined Naughty Dog during Uncharted 2's development.

"When we started doing Uncharted 2, we knew we had something going with Uncharted 1, or [the team that was already there] did. I certainly thought so, outside of the studio. Then Uncharted 2, getting that formula down, that was the whole project. It took a long time to figure out what was cool about collapsing handholds, what was cool about stuff falling apart... It's the illusion of danger, right?"

"The thing is," he continued, "if I touch it, it's going to fall apart, but in reality you're safe, right? That motivator worked for a couple of years. I think now it doesn't work anymore. People are more sophisticated. Gamers have seen through that illusion now. You can no longer rely on that to up your emotional pace or change the motivations in the story, because people see through it. 'Oh, this is nonsense, right? I realize that this thing is never going to fall and kill me. It's always going to break the second I jump off of it.' That stuff. It's amazing how fast the industry has turned, how quickly people caught on to those tricks."

But like with the original Uncharted, Naughty Dog didn't quite know what it had with Uncharted 2 until a very specific time: E3 2009. It was there that the studio started getting feedback from critics and gamers alike, upping the ante on what was very easily the most exciting PlayStation 3-exclusive of the year.

"With Uncharted 2, we were a lot more strategic in how we aligned things," Sam Thompson said. "We learned a lot of lessons with the first [Uncharted]. Had it not been for the stellar E3 that we had [in 2009], it would have been a different story. Uncharted 2 at E3 was this magical ride for us, where the stage demo at the press conference started it."

...holy crap, this is huge. This is a huge game.

"

"We were smart enough – this was, again, something Evan had insisted on – having a lot of content to show, having multiplayer on the floor," he continued. "Being able to show a little bit of co-op and having a different single-player level for the press, on top of what we showed at the press conference. I think it really showed just how far we had gone from 1 to 2. The emphasis on truly making this a summer blockbuster movie and putting Drake in this role of relatability and someone that people could identify with. It was just magical."

Justin Richmond agreed. "Personally, I didn't know what we had until E3," he said, laughing. "I had an inkling. Well, it was weird, because I'd never worked on a game of this caliber before. I'd never worked at a triple-A developer before. I always had a sense of what a triple-A game was, and I knew I was working on something that was awesome. I knew that the game was going to be really cool. But I didn't know what it was going to do at the end until E3."

"Then it was like, "holy crap, this is huge. This is a huge game.' Regardless of what it was going to sell, just the impact it was having on people writing about it. I'd never been part of anything like that before. It felt special, inside the studio. It was terrifying at the same time, because we finished that E3 demo and it was like, 'wait, three-quarters of the game doesn't look like that yet.' Or maybe 50 percent of the game. It was a lot of hard work going from taking that one demo and the other two that we had and taking the rest of the game up to that level, and at the same time trying to

do multiplayer."

Uncharted 2 was Naughty Dog's first real foray into multiplayer.

"It was a lot of stuff where it was like, 'we can't do that! We gotta figure out a way!' Then we were releasing the demo. We did the multiplayer live demo to test our net code. We'd never released a multiplayer game like that before. Jak X had some networking stuff, but nothing at the level we were trying to do. Realizing after E3, 'oh my god, we have to change the way we're doing stuff, it's not working.' All that kind of stuff. But E3 was the moment where I was like, 'this is gonna be enormous.' Even then, I don't think it really hit me until a year later. 'Wow, we did that. That was nuts.' And by that point, we were already halfway through Uncharted 3."

Uncharted 2: Among Thieves launched exclusively on PlayStation 3 in late 2009, and was a critical and commercial smash hit. It is considered by many – including IGN – to be the best game released on any platform that year. But even with the positivity of the game's E3 showing didn't prepare Naughty Dog for the seemingly infinite accolades that would be in store for them.

"You're working on this stuff, and especially if you're working on it piecemeal, in

disparate parts, and it's not necessarily actually being worked on sequentially. You have this level and this thing and this tech you're working on, this thing over here, this problem," Josh Scherr explained.

We knew the game was good when we finished it, but we were miles away from thinking [winning so many awards and accolades] would happen.

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"You're doing the work, but you don't necessarily have the big picture view of what you're doing. There was some point, I think in beta, where it just hit me. I remember walking into Evan's office and saying, 'dude, this is going to blow up.'"

Evan Wells notes that the game's success "absolutely" surprised him.

"We knew the game was good when we finished it," Christophe Balestra added, "but we were miles away from thinking [winning so many awards and accolades] would happen. Even today, it's almost ridiculous. I don't know if it's going to happen again. But we were totally caught by surprise."

"I think it's a Naughty Dog cultural thing that we just don't crank out a version [of a game] every year or every two years. That's not our thing..." Bruce Swanson said. "You don't want to rest on your laurels. So that goes without saying... With the success of [Uncharted 2], there were some moments that were like, 'what now?' You get to the top of that and it's sort of like, some people think this is the best game of the console's lifetime."

"I don't know if Christophe wants me to tell this," he went on, "but one day – because, at the time, he lived close to me – he needed a ride while he was getting one of his cars worked on. So I picked him up at his house. This was shortly after the game had shipped. It was one of those reflective things, where we were talking about how great

Uncharted 2 was."

7:07

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"What he said was kind of interesting. I don't think this has turned out to be true. As a matter of fact, I think we proved it's not true, especially with The Last of Us. But he said, 'yeah, it's so amazing how that came together… that could end up being the best game any of us work on in our careers.'"

"[It] was both kind of a cool thought, but also kind of a depressing thought. I thought about it. I thought, well, this isn't that far from records. You've got Pink Floyd with Dark Side of the Moon. All their records are good, but that's it, man. You get there and there's only one way. So it's something you do consider sometimes. But in true Naughty Dog style, it's just onward and upward."

It seemed that Naughty Dog's newest game was winning every award out there. "It was just Uncharted 2," Pangilinan said. "When it came out, suddenly everyone knew us."

"It was pretty amazing," Reuben Shah added. "When we were getting BAFTAs, I was like, 'holy crap, I'm holding a BAFTA.' We had like six of them."

There were a lot of games out there at the time, but they were hating on us because we took every single award. Sorry, guys.

"

"We'd never gotten anything before," Pangilinan admitted. "Look at our display [case]... like 90 percent of that is just Uncharted 2, that one title... There are a lot of games out there that are really amazing. It was almost embarrassing, with Uncharted 2, because a lot of our competitors just got shutout. They got nothing. We might as well have just stayed up on the stage. But a lot of them were actually really good."

"Yeah. There were a lot of games out there at the time, but they were hating on us because we took every single award. Sorry, guys," Shah said with a laugh.

As the visionary behind Uncharted's characters, stories, and its overarching universe, the success of the sequel perhaps surprised Amy Hennig the most. "When you're down in it all, all you see is all the terror of everyday game development, all the things that are going wrong," she said. "You can't see the pieces. People don't realize what a tremendous and sustained act of faith game development is, because you really can't see the pieces coming together until maybe two months from the end. Maybe less."

"You have all of these people all working in unison on all their little parts, and you can't really see how they're going to fit together. Everybody's just gotta keep going on the faith that they trust each other. It all worked before. We'll get it all put together. Then, at the very end, all this stuff starts going in and working. People are like, 'oh my god, I can see the game!'"

With Among Thieves behind them, it was time to move on to Uncharted 3.

"It was a mystery before. It was a bunch of broken stuff that didn't link together. You couldn't tell if it was going to be fun. Then it just starts to coalesce at the very end... We were so up to our eyeballs. You just can't see it objectively. Then we realized, 'oh my god, we've really got something here'... But no, I don't think we even foresaw how well it would come together or how it would be received. Sometimes, these things are just the right product at the right time in the right climate. I don't know. It's one of those weird lightning in the bottle things that's hard to repeat."

But things wouldn't be grand forever, and the studio would have to at least attempt to repeat Uncharted 2's success. Naturally, it was hard for the studio to figure out where to go from there, or how it could possibly follow-up something as grandiose and well-received as Among Thieves.

"You have this crazy, incredible achievement, and you're like, 'oh, now we gotta match it. Fuck...' Now we're going to do Uncharted 3. What can we do? Let's have them fall out of an airplane!" Shah said, jokingly.

We feel an enormous amount of pressure with every game we make. It has our name on it.

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"We feel an enormous amount of pressure with every game we make," Evan Wells admitted. "It has our name on it. We want to deliver something that's going to entertain millions of people. We don't want to disappoint them. So I don't think we're driven by pressure to make the game of the year, a game that's going to win awards."

"We just make what we think is right," Christophe Balestra picked-up. "You can't go that way. That would be impossible, trying to please everyone."

"The pressure [of] Uncharted 3," Taylor Kurosaki said. "We've never, in our studio's history, been in a situation where you could feel the anticipation for this game coming out. Before we even started on it. It was nuts. It was weird. It was the first time we didn't feel a bit like the underdog. It was the first time we didn't feel under the radar. We knew, in our hearts, that we still are these underdogs. But the expectation was for greatness."

"I just remember after the euphoria of the crazy-amazing review scores coming out after Uncharted 2. It was just, 'oh fuck, how are we going to top this?'" Josh Scherr added.

"Uncharted 3 was the accumulation of all the things we couldn't do in 1 and all the things we couldn't do in 2, and now a whole huge community with expectations. How do you beat Uncharted 2? Those were the pressures for Uncharted 3," Tate Mosesian said. "If I squinted my eyes, Uncharted 2 was the better game all the way through. But I actually like Uncharted 3 a little bit better. It spoke to me a little bit more."

"The huge plot holes and weird storylines that just get dropped. You just stop at a wall. 'Wait, what happened to the tarot cards?' A lot was lost along the way. But I

wall. "Wait, what happened to the tarot cards?" A lot was lost along the way. But I think at the same time, we were able to smooth that over a little bit with some of the more druggy scenes, where the whole game was just a lot more, I'm going to use a stupid word, but sort of ethereal."

Video Review

4:16

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Uncharted 3's development was complicated by an issue that was, at this point in Naughty Dog's history, one it already went through. Sony and Naughty Dog again wanted to attempt to make two games at a time. That means that some of Uncharted 2's team would move on to a new project, one that would end up being The Last of Us. All hands would be on deck for both titles as needed, and people would often rove back and forth between projects, but there was, for the first time in Naughty Dog's history, two games in simultaneous development that would both, ultimately, see the light of day.

"In a lot of ways, we had to transition, again, on Uncharted 3," Pangilinan said. "[Part of the leadership] team on Uncharted 2, Bruce [Straley] and Neil [Druckmann], were working on The Last of Us. You had a lot of changes in management that had to be moved over to fill in on Uncharted 3. Those people needed to adjust. On the translation of that, you got Uncharted 3 as a result. I don't think it was a bad game or lesser, it's just a different game. It had a different pace."

"[Uncharted 3] was hard," Richmond admitted. "It was my first project as director. We were all really tired after making 2. It took a while to get the studio back into functioning shape, just in the sense of people being able to even stand it for eight hours a day. We wanted to shoot each other by the end of 2. Just in the sense of, 'I have been here for 18 hours, I am going home!' That kind of stuff."

We were all really tired after making 2. It took a while to get the studio back into functioning shape, just in the sense of people being able to even stand it for eight hours a day.

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"But we pulled it all back together. We had a lot of really cool ideas coming off of 2 that we wanted to implement, like the cruise ship stuff and the cargo plane. Those were really early ideas that we wanted to try out. People were really excited. But there was a lot of pressure to make that game be something better than Uncharted 2. In a lot of ways, I think we tried. We legitimately tried. There were a lot of complaints about the game, but I'm still really proud of it… it's [got] a 92 Metacritic rating."

Uncharted 3: Drake's Deception wasn't as well-received as Uncharted 2 when it came out in the fall of 2011, but it was still considered a hit for PlayStation 3, and it sold millions of copies around the world. Still, it's not widely considered to be the major achievement that Among Thieves was.

"Would I change anything?" Richmond asked, rhetorically. "Certainly. But hindsight, right? There's no doubt in my mind that we could have done some stuff better, but I think there's a lot of really cool stuff in the game. The narrative is really strong. It made Drake a more interesting character, which was the most important thing. And the hype, [it was] through the roof. I don't know what you do about that. I think we

delivered at a very high level. I can't complain."

"Justin Richmond did a great job coming in for Uncharted 3," Sam Thompson exclaimed. "He's incredibly talented as well. I thought we did a really good job with Uncharted 3. It was interesting. Amy really tries to create new and unique experiences. She doesn't want to play on established hallmarks of the genre, but she also doesn't want to revisit things that she might have hinted to or executed in previous games."

Elena's relationship with Drake was at the center of Uncharted 3.

"So the whole intro for 3, with the young Drake at the museum, all that stuff was important. It was important to make you believe that Drake had been shot and all these things. But I don't think we encapsulated the tension that we achieved with the intro for Uncharted 2. Everything from the train car, in that moment, it was probably one of the single greatest intros of any game that I've played. Now, I know I'm a little biased, but it always felt that way to me. That was epic."

"And I think it's really difficult to follow-up with anything less than epic times two," he continued, "and then what? We put ourselves in a very difficult situation to follow-up.

But the game still reviewed very well. How do you have any qualms with anything these days over a 90 [on Metacritic]? It's practically unheard of, anyway."

"I think there are some things we could have done differently. We could have spaced the story a little differently, maybe changed the order of the levels. There's still some internal discussion on that. But I think Amy was really happy with the vision and the execution. I think that's what matters. You need people on the studio level to stand up and have some conviction and say, 'look, this is what I want to do. This is the course and we're sticking to it.'"

I think there are some things we could have done differently. We could have spaced the story a little differently, maybe changed the order of the levels. There's still some internal discussion on that.

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"Our multiplayer, I thought, was really awesome in 3," Shah said. "It was awesome in 2 as well, but 3 really defined our multiplayer. People still play Uncharted 3 multiplayer. It's still going. In some respects, as far as story and pacing, I personally thought Uncharted 2 was a little tighter. But the scope of the game is different."

"In terms of art, what we did, it was much bigger. I can see it, because the outsourcing budget was large," Pangilinan said, laughing. "That's reflected in the fidelity of the game. You should also remember, in Uncharted 2 and Uncharted 3, we globe-trotted. We created more looks. We can't reuse a lot from our previous games because it's all from different parts of the world. It's pretty unique. A lot of art production went into Uncharted 3."

"You also get bigger set pieces... We focused on that," he continued. "What did the fans like? They liked all these [set pieces]. It was crazier, the original [cruise ship sequence]. That boat was supposed to be Titanic-sized. You were supposed to run

across it. The whole thing was supposed to snap in two. It was crazy. The plane scene, too, was stripped down. You were supposed to have zero gravity fights up in that thing. All of those boxes would fall and you'd have a different setup for combat."

"All of that never happened because of the scope," Pangilinan later added.

"Yeah," Shah jumped in. "We aim high and then see what we can really do. I think that's how we work… But I'm glad we shoot for the stars, instead of playing it safe."

Is Uncharted 3 Still a 10 After The Last of Us?

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"It's like Jackie Brown after Pulp Fiction," Tate Mosesian said. "It's not as good as Pulp Fiction. I'm not comparing us to Quentin Tarantino, by the way. But people had huge expectations [of Uncharted 3]… I think we were just up against something people didn't want to let go of."

"Critically, yeah, [Uncharted 3] was a let down," Bruce Swanson admitted. "But we kind of, I think, looked at it from several viewpoints. One was, what did we do wrong, if we did anything wrong? What is it that was not as satisfying, possibly? There was a lot of introspection with that. Stuff that was actually valuable came out of that."

"But the other thing was, of course, an understanding that, look, you get to the top of the heap and sometimes that is enough," he continued. "Fans are like, 'okay, yeah, been there and done that.' Some might say that they can get fickle. I don't necessarily believe that. I think there were some legitimate gripes [with Uncharted 3]. It's a great game. Compared to a lot of other stuff out there, you might say it's still awesome."

It's like Jackie Brown after Pulp Fiction.

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"Obviously, review scores and public response are very important, but you want to distill that stuff down and take the most important aspects out of it, rather than just being completely reactionary to things that you read online," Josh Scherr said. "If you read [online gaming forum] NeoGAF, Uncharted 3 is simultaneously the best and worst game ever made. It's kind of like Scrodinger's cat in a way."

"You have to figure out, okay, what are the complaints that are legitimate and things that we should consider? Versus this person had crazy expectations for the game that they wanted to play, and because it was not the game they wanted to play it is therefore the worst. You have to distill down. What is the important stuff to take away from this?"

"A lot of it is just confirmation," he later said. "None of the criticism, the legit criticism of our games, has ever really caught us off guard. It's stuff we're aware of, and for whatever reason we did not have time to address it."

"If Uncharted 3 had come out second, I think it would have gotten all of the same recognition [that Uncharted 2 got]," Wells said. "It's just that what we did with Uncharted 2, I think it's been mimicked by a lot of our competitors out there. It was bringing these action set pieces to life and making these things you usually see in the movie theater playable."

"By the time the third one came out, that had been done by us," he continued. "So it didn't have the same impact. It didn't have the same wow factor, having never been

didn't have the same impact. It didn't have the same wow factor, having never been exposed to that experience before. Technically, it hits just as many, if not more marks than Uncharted 2 did. There are more moments in that game that I still think are the best in the series. Narratively, there are some scenes in there that tug at the heartstrings in ways you didn't get in 2. So yeah, I think it was just the order that they came out."

You haven't seen the last of Nathan Drake.

"But… we still did really well," Christophe Balestra added. "Maybe it feels like it was slightly underappreciated. But I'll take that any time. Uncharted 3 was a great success."

"There's also something about success painting a bigger target on your back," Wells interjected. "Now it's hip to hate on what's successful. Once all those awards were given to the second one, now people are just going to look for reasons to pick on the next one that comes out. The gaming culture has a tendency to try to dog-pile on successful games."

"We perfected a bunch of stuff in 3," Richmond said. "[But] first of all, just the jump in graphical fidelity between 1 and 2 was just enormous. We were always going to have

a hard time doing that again. We couldn't. The amount of time we had, we weren't going to reinvent the lighting engine... We made a bunch of decisions based on, 'this is the kind of game we're making, we can still make it look better than 2, but we're going to do certain things a certain way because it's a two-year cycle and we're going to ship on time.'"

Maybe it feels like it was slightly underappreciated. But I'll take that any time. Uncharted 3 was a great success.

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"We just made some decisions on what were going to do... and, yeah, I think if you flipped 2 and 3, people would say the same stuff about 2. There's some stuff I like better about 2. There's some stuff in 3 I like better. There's some stuff in 1 I like better. It's one of those things where they're very similar games in a lot of ways, so I think you could mish-mash them... maybe we could make an uber-game to get all the best of both," he said with a laugh.

"I've said a lot of times, that this is sort of the curse of making sequels," Amy Hennig said. "If your first one is successful, you have a lot of people who all love it for different reasons. Then you can't just replicate it wholesale, so you have to focus on new things and expand in new areas. You're going to fracture that fanbase, because some people are going to like what you did, and then some people aren't. Then you make another one, and you're going to fracture it again."

"They'll be like, 'I love this part, and I love that they went to town on that, but why didn't it have more of this?' You just can't make everybody happy. It's hard making sequels, because you also want the feedback. You want to know what the fans and the media are saying and thinking, but at the same time, you can really drown out the internal voice that got you there in the first place. You're not left alone as much to just figure out what's best to do."

"Everybody's got an opinion," she went on. "Externally, too. We invite those opinions in by saying, 'well, I'm gonna go read the message boards or read all the reviews.' It

can get into your head a little bit. To some degree, I think where we took criticisms, some of them were warranted. If anything, we're probably more critical of our work than anybody. That's always the case. I think there are certain choices we made that we would make again, because that's what we wanted to do with the characters, the story, or the franchise."

10:40

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"For some people, 3's their favorite. For some people, 2's their favorite. You have to just, at some point, accept the fact that you can't make everybody happy. I think for us, too, given the circumstances that we knew we were going into with the development. We knew we probably couldn't, under any circumstances, anyway, replicate Uncharted 2, because again, I don't think that if we made Uncharted 2 again, wiped everybody's memories and made it, that it would have been as successful, because at that point we also had a lot of imitators, a lot more games like that."

"I think, again, sometimes, these things just hit at the right moment in time. So yeah, we tried to take all the criticism on board. You try not to let the positive stuff or the negative stuff get to your head too much, although it's hard with the negative stuff... You get a positive comment, or 10 positive comments, and you just brush it off. Then

one negative comment just wakes you up at three in the morning, crying," she said, chuckling.

When you're a game developer and people say, 'oh, they're lazy developers, they try to take advantage of the consumer, they're phoning it in.' No. None of that is ever true. At least not in my career in this industry, and certainly not here at Naughty Dog.

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"When you're a game developer and people say, 'oh, they're lazy developers, they try to take advantage of the consumer, they're phoning it in.' No. None of that is ever true. At least not in my career in this industry, and certainly not here at Naughty Dog. Everybody just pours their souls into everything they work on. That doesn't mean it's always going to be brilliant, but that's a lesson you learn as you get older, or as you've been doing something creative as a career. You certainly find yourself not being as critical of other people's work, because you know what it takes to get there."

"There's been a lot of people that have moved from the journalism side into game development... the experience is so different. They realize that there's so much that folks don't even know about what goes on, the compromises that have to be made and how gut-wrenchingly painful they are. But you have to make them. You have a responsibility to your schedule and your publisher at some point. Sometimes that compromise is made because something else could be made better. But how do you communicate that? You can't."

"At the end of the day," she concluded, "the product has to speak for itself. You have to put it out there and let it live or die on its own merits. But I'm proud of everything

that we've done. I'm proud of all three games."

But Uncharted wouldn't be the only series Naughty Dog would hang its hat on. While Uncharted 3 was being created, another team worked in secret on a game very different from anything the studio had ever done before. And it would, for many, surpass anything Naughty Dog had accomplished in its history.

Part V is coming soon...

Colin Moriarty is IGN's Senior Editor. You can follow him on *Twitter.*

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YES   NO

In This Article

Crash Bandicoot

Summary: Take control of Crash as he runs, jumps, and spins through 30 levels of intense action. Only you can help Crash save his girlfriend, and foil Dr. Cortex's nefarious plot.

Franchises: Crash Bandicoot

Genres: Platformer

Platforms: PlayStation Portable, PlayStation 3, PlayStation, Android

Developers: Naughty Dog Software

Publishers: Fillpoint, Sony Computer Entertainment

Features: Number Of Players, Memory Card, Memory Blocks

Release Date: June 22, 2007

2h - 💬 127

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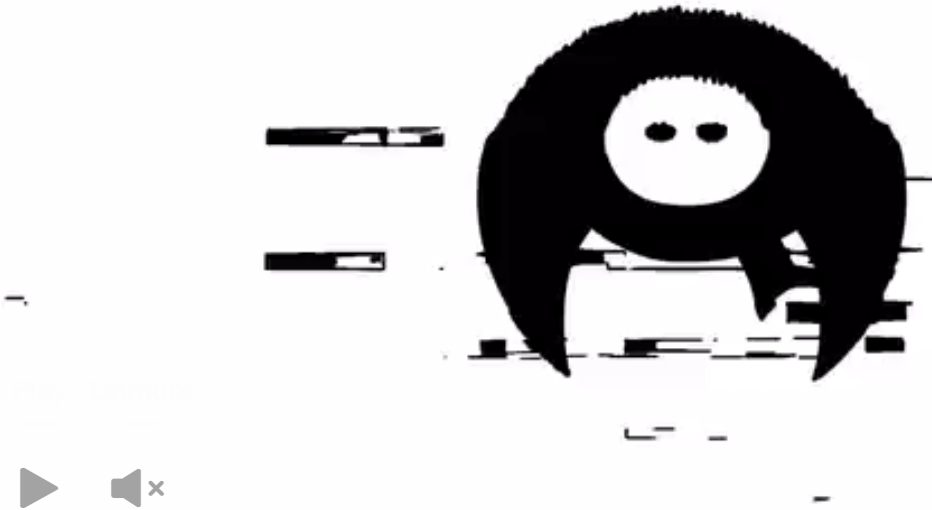
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